



3.0 AFFECTED ENVIRONMENT

This chapter describes the existing social, economic, and environmental conditions in the Russell Street and South 3rd Street corridors. The information in this chapter serves as the baseline for assessing impacts associated with the proposed reconstruction and widening of Russell Street from Mount Avenue to West Broadway Street, and South 3rd Street from Russell Street to Reserve Street. Chapter 4 – Impacts and Mitigation – documents the analysis of social, economic, and environmental consequences of the proposed action in relation to the existing baseline.

Guidance provided by the National Environmental Policy Act (42 United States Code 4332(2)(c)), Montana Environmental Policy Act § 2-2-104 and § 75-1-201 Montana Code Annotated), the Federal Highway Administration (Technical Advisory 6640-8A), and the Montana Department of Transportation identified issues of concern that require analysis. The following issue areas are traditionally reviewed in an Environmental Impact Statement and are documented in this chapter:

- Land Use
- Farmlands
- Social Conditions
- Economic Conditions
- Parks and Recreation
- Pedestrian and Bicycle Facilities
- Air Quality
- Noise
- Water Quality
- Wetlands
- Water Bodies and Wildlife Resources
- Floodplains
- Threatened and Endangered Species
- Historic and Cultural Resources
- Hazardous Materials
- Visual Resources

3.1 Land Use

This section describes existing land use and zoning patterns in the project area. Applicable City land use policies and comprehensive plans are also discussed. City land use policies, comprehensive plans, and zoning information were reviewed to determine existing land uses in the project area.

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Existing Land Uses

The Russell Street corridor can be characterized as commercial/light industrial in the southern portion from Mount Avenue to the railroad crossing at Ronan Street, primarily residential from the railroad north to South 3rd Street, and commercial/retail from South 3rd Street north to West Broadway Street. South 3rd Street is primarily commercial with pockets of high-density residential from Reserve Street to Russell Street.

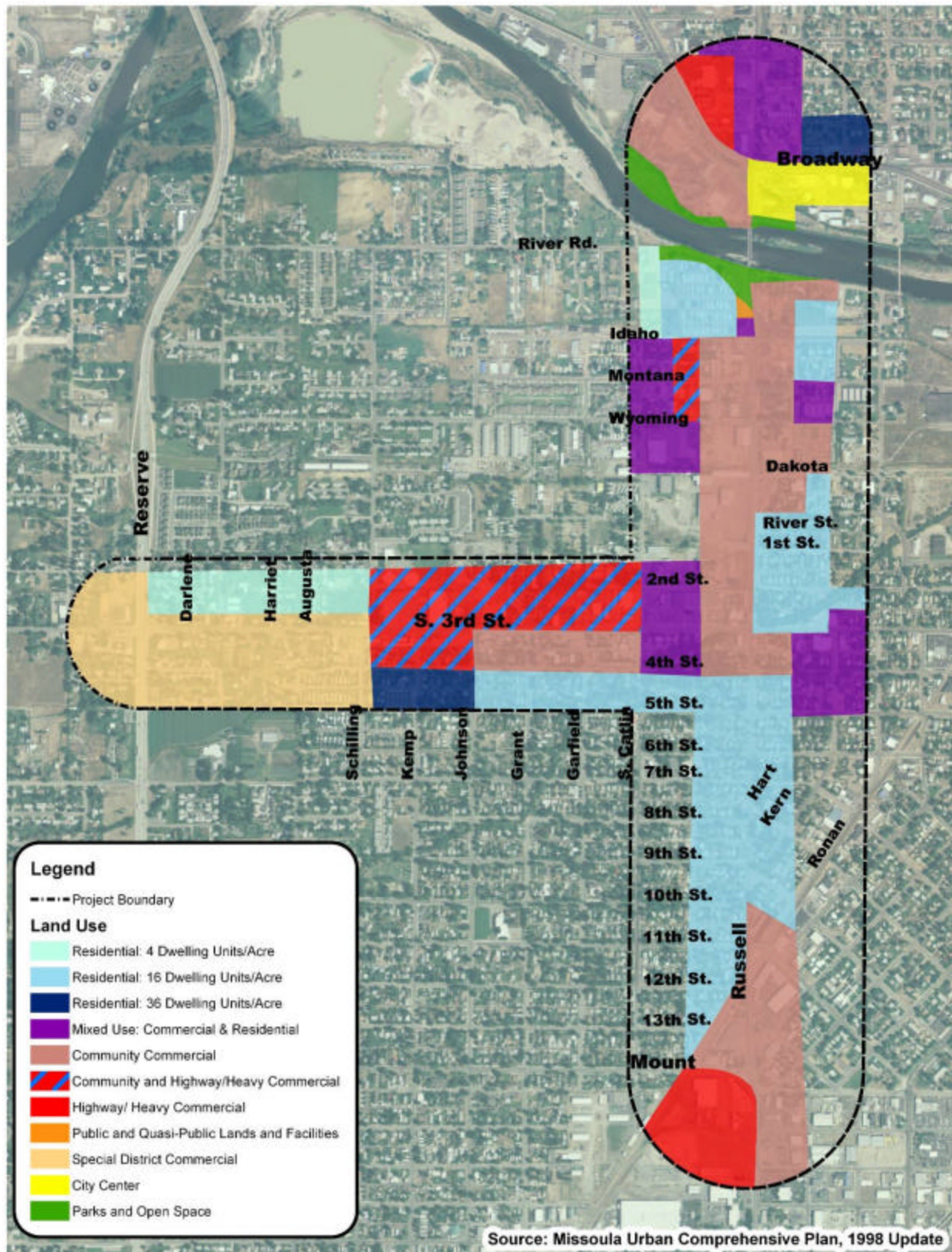
Two large infill sites are also located in or near the study area. The old Intermountain Lumber site (Market Square) is a large parcel that fronts Russell Street on the west side, south of Dakota Street. This site is currently planned for major redevelopment as a mixed use retail/office/residential development. The Champion Mill site is also located near the project area and also has plans for a mixed use development and would have roadway network and trail connectivity to the Russell Street and South 3rd Street corridors.

The following provides a general description of the types of uses in these corridors. Figure 3-1 illustrates the existing zoning in the study area.

- ***Residential Use*** - Most residences in the project area are single-family structures, but there are multi-family structures including duplexes, triplexes, and four- to eight- unit structures along both corridors. Three mobile home courts are located within the study area along South 3rd Street.
- ***Commercial and Retail Use*** - Commercial and retail activity in the study area provide retail goods and services to the surrounding residential area. The project area supports a variety of businesses that are primarily small and locally owned. Businesses located within the project area include a beverage distribution warehouse, car dealerships, construction and home improvement businesses, gas stations, small markets and grocery stores, professional offices, an auto body service and supply, restaurants, and hotels.
- ***Public Lands and Facilities*** - Land ownership within the project area is primarily private; however, the City has designated two small public parks in the project corridor, Hart Park and Kern Park. The proposed project also intersects three trail systems: the Shady Grove Trail, the Milwaukee Corridor Trail, and the Bitterroot Branch Trail. (These resources are discussed in more detail in the *Parks and Recreation* section).

The City of Missoula has designated a small area of land south of the Russell Street Bridge and on the west side of Russell Street as public land. This property is zoned P-II: Public Lands and Institutions District. The City of Missoula has also preserved a narrow strip of land on each side of the Clark Fork River, which includes the Shady Grove Trail, as an “area of riparian resource” for the benefit of the public.

Figure 3-1
Land Use



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Local Land Use Policies and Regulations

The *Missoula Urban Comprehensive Plan–1998 Update* is a policy document intended to provide the City, County, and other agencies and districts with a coordinated guide for long-term change. The Plan provides planning and regulatory tools to achieve a countywide pattern of community building, land use, and conservation that reflects the environmental, economic, aesthetic, health and social values of the Missoula County residents. The neighborhood between Russell Street, South 3rd Street, Reserve Street and the Clark Fork River completed an *Infrastructure Plan* in 2004 as an amendment to the *Missoula Urban Comprehensive Plan–1998 Update*. The *Infrastructure Plan* is primarily an inventory of existing infrastructure and a review of potential linkages between trails, parks, and roads.

Land uses identified in the *Missoula Urban Comprehensive Plan–1998 Update* for the study area are visually represented in Figure 3-1 and include (in order from most to least prevalent) residential, community commercial, community and highway/heavy commercial, mixed use: commercial and residential, special district commercial, public and quasi-public lands and facilities, and parks and open space.

A portion of the proposed project is located within Urban Renewal District 2, which is one of six sub-districts of the proposed City Center District as defined in the *Missoula Urban Comprehensive Plan–1998 Update*. The City Center District concept, presented in the plan, is intended to encourage continued commitment to renovation of Missoula’s urban core.

Zoning in the Study Area

Zoning within the study area is regulated primarily by the Missoula City Zoning Ordinance (Title 19). However, the parcel containing the Pink Grizzly Nursery, located on the east side of Russell Street between Wyoming Street and Montana Avenue, is governed by County zoning. Residential, commercial, and mixed-use zones predominate, and these zones are moderately fragmented throughout the study area, as opposed to consisting of large contiguous areas of uniform zoning.

As described in the *Reserve Street Area Plan 1995 Update*, a Special District #2 zoning district was created along Reserve Street, generally between South 3rd Street and South Avenue West. This special zoning ordinance was created to “discourage the aesthetic and functional pitfalls of strip commercial development and, instead, foster a healthy mix of residential and light commercial activities along the heavily traveled roadway.” The City Special District #2 Ordinance affects several properties along South 3rd Street, and is intended to promote a wide range of land uses including residential, business offices, and other commercial activities.



3.2 Farmlands

Based on consultation with the Missoula office of the Natural Resource Conservation Service, there are no farmlands located within the study area. The Russell Street and South 3rd Street study area is designated urban land by the Natural Resource and Conservation Service, and therefore the provisions of the Federal Farmland Protection Act do not apply. No further analysis of farmland conditions or impacts will be conducted for this proposed project.

3.3 Social Conditions

This section provides an overview of the general social conditions in the study area including population, demographics, community facilities, and parks and recreational facilities.

Population

As shown below in Table 3.1, the U.S. Census Bureau reported Missoula County's population in 2000 as 95,802, up from 78,687 in 1990. Annual population growth averaged 1.99 percent in Missoula County during this time. The population of the City of Missoula was 57,053 in 2000, up from 42,918 in 1990. The average annual growth rate for the City of Missoula was much greater than that for Missoula County during the period 1980 to 1990. Between 1990 and 2000, however, the average annual growth rate for the County (1.99 percent) was much closer to that for the City (2.89 percent).

Table 3.1
Missoula County and City of Missoula Population Growth, 1980-2000.

Area	Total Population 1980	Total Population 1990	Total Population 2000	Average Annual Growth Rate (%) 1980-1990	Average Annual Growth Rate (%) 1990-2000
Missoula County	76,016	78,687	95,802	0.35	1.99
City of Missoula	33,388	42,918	57,053	2.54	2.89
Project Area ^a	N/A	18,896	21,313	N/A	1.21

Source: U.S. Census Bureau, 1990, 2001a.

^a Includes Census tracts 2.01, 7, 8, 10, and 11.

Minority and Low-Income Populations

Data related to the racial composition of the State of Montana, Missoula County, the City of Missoula, and the project area were obtained on-line from the U.S. Census Bureau and are based on the 2000 Census. Table 3.2 below illustrates that the population of the project area (Census Tracts 2.01, 7, 8, 10, and 11) has slightly greater racial diversity than the City of Missoula as a whole. Larger populations of Native Americans and people of Hispanic or Latino descent account for this difference in racial composition. As shown in Table 3.2 below, the population

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of the project area has slightly less racial diversity than the state of Montana because the Native American population is higher for the state as a whole.

Table 3.2
Racial Composition

	State of Montana	Missoula County	City of Missoula ^a	Project Area ^a
White	817,229 90.6%	90,073 94.0%	53,387 93.6%	19,631 92.4%
Black	2,692 0.3%	261 0.3%	207 0.4%	89 0.4%
Native American	56,068 6.2%	2,193 2.3%	1,341 2.4%	695 3.3%
Asian/ Pacific Islander	5,161 0.6%	1,058 1.1%	760 1.3%	284 1.3%
Hispanic or Latino	18,081 2.0%	1,543 1.6%	1,004 1.8%	440 2.1%
Other	2,964 0.3%	674 0.7%	354 0.6%	106 0.5%
Total	902,195	95,802	57,053	21,245

Source: U.S. Census Bureau, 2001a.

^a Percentages add to more than 100 percent due to rounding.

As documented in Table 3.3, the percentage of the study area population living below the poverty level in 2000 was 25.7 percent compared with 19.7 percent for the City of Missoula. The poverty rate in Missoula County was 14.8 percent, while the percentage for the state was slightly lower at 14.6 percent.

Table 3.3
Estimated Percent of Population Below the Poverty Level

Poverty Level	Montana Percent of Total	Missoula County Percent of Total	City of Missoula Percent of Total	Project Area Percent of Total
Above	85.4	85.2	80.3	74.3
Below	14.6	14.8	19.7	25.7
Total	100.0	100.0	100.0	100.0

Source: U.S. Census Bureau, 2001a, b.

Executive Order 12898, issued in February 1994, directs all Federal agencies to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations in the United States . . .” It is not uncommon for low-income residential areas to be located closer, or adjacent to, highway and major arterial corridors. In the interest of privacy, potentially impacted residences were not surveyed to identify their individual status within any disadvantaged group; however an assessment of



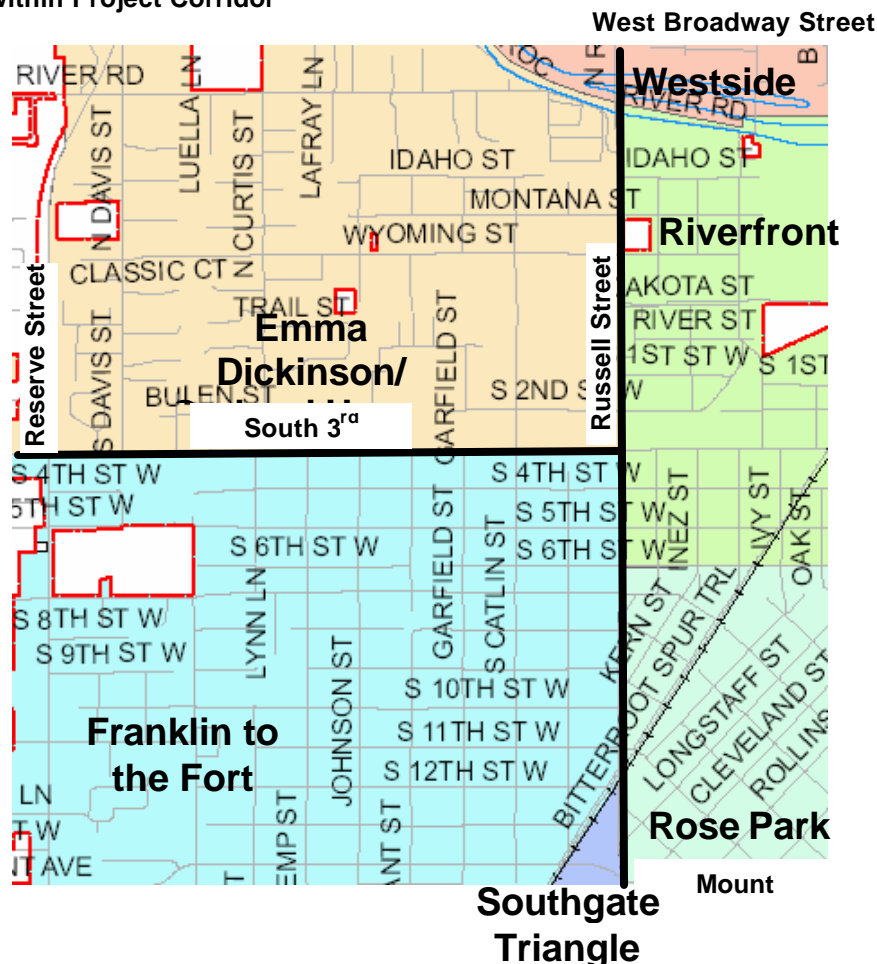
disproportionate impacts on low income and minority populations is made in Chapter 4 of this document based on this Executive Order.

Community and Public Facilities

The project study area lies within six neighborhoods in the City of Missoula as shown in Figure 3-2. Russell Street has historically identified the western edge of the River Front and Rose Park neighborhoods, and the eastern edge of the Emma Dickinson/Orchard Homes, Franklin to the Fort, and the Southgate Triangle neighborhoods. Additionally, South 3^d Street forms the southern edge of the Emma Dickinson/Orchard Homes neighborhood, and northern edge of the Franklin to the Fort neighborhood.

In addition to the six neighborhoods identified above, the study area also forms the edge of three elementary school districts (Franklin, Hawthorne, and Paxson), two middle school districts (C.S. Porter and Washington), and two high school districts (Big Sky and Hellgate). Russell Street and South 3rd Street serve as the jurisdictional boundaries between each of these districts. The Hellgate District is the only school district that crosses Russell Street within the project area, and only does so for a small segment between Mount Avenue and South 7th Street.

Figure 3-2
Neighborhoods within Project Corridor



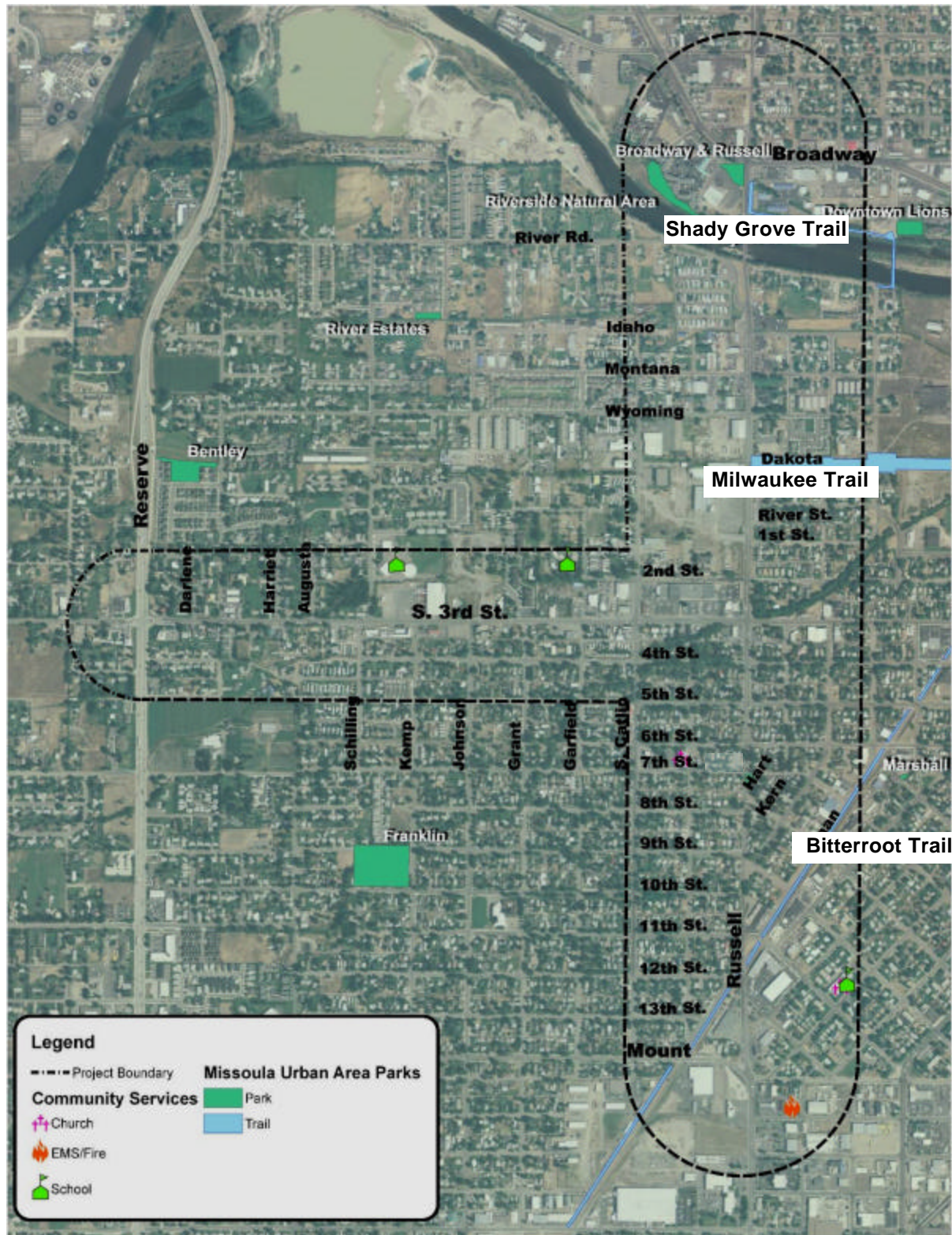
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The study area contains several facilities providing public services including schools, churches, emergency services, and medical care. The project area is also served by the Missoula Fire Department, who provides fire suppression and emergency medical response, technical and rope rescue, river rescue, fire investigations, non-emergency public service calls, public education, and code enforcement within the city limits.

The Missoula Fire Department operates five stations within the City of Missoula and crews respond to emergencies depending on the proximity of station location to the location of the emergency and the availability of crews. Fire station 2 (located at 247 Mount Avenue) typically responds to emergencies on Russell Street from Mount Avenue to South 3rd Street. Fire station 4 (located at 3011 Latimer Street) typically responds to emergencies on Russell Street from South 3rd Street to West Broadway Street, and on South 3rd Street from Russell Street to Reserve Street.

Figure 3-3 illustrates the location of these facilities within the study area. While none of these facilities are located immediately on either Russell Street or South 3rd Street, the route provides primary access to and from these community and public facilities within this part of the city.

Figure 3-3
Community and Public Facilities, and Parks and Recreation Areas



3.4 Economic Conditions

In general, Missoula County's economy grew faster than that of the state as a whole. In addition, the Montana Department of Labor and Industry reported the annual average unemployment rate for Missoula County decreased from 5.9 percent in 1990 to 3.3 percent in 2000.

Employment

For the past two decades employment in Missoula County has grown more quickly than that for the nearby counties. According to the Missoula Area Economic Development Corporation, as of March 2002, the unemployment rate in Missoula County was 4.2 percent, down from 5.9 percent in 1990. Unemployment rates in 2002 for three nearby counties, Mineral, Sanders and Ravalli counties, were 10.2 percent, 12.4, and 6.0 percent, respectively.

Housing

Between 1994 and 2000, the median price of homes sold in Missoula and the immediate suburban areas increased by 34 percent from \$98,500 to \$132,000. As of April 2001, the Missoula Area Economic Development Corporation reported the average home sales price in Missoula had increased by 11.7 percent from the previous year to \$147,950.

Information on rents was obtained from the U.S. Census Bureau and is based on 1999 data. The median gross rent for the project area is \$512, which is roughly the same as the median gross rent for the City of Missoula (\$524) and Missoula County (\$530). Median rents for the state of Montana are lower (\$447) than those found in the Missoula area.

3.5 Parks and Recreation

Three publicly owned trail facilities and two passive parks are located within the project area and are discussed below. Figures 3-3 illustrates the location of area parks and trails in the project corridor.

Bitterroot Branch Trail - Within the project corridor, the Bitterroot Branch Trail is located within a portion of the railroad right-of-way adjacent to the active rail route operated by Montana Rail Link. The two mile trail extends from Hickory Street near McCormick Park, across Russell Street to McDonald Street. The trail is maintained by the City of Missoula Parks Department. Portions of the trail outside of the railroad right-of-way are owned by the City of Missoula. There is an existing at-grade crossing at the intersection of the Bitterroot Branch Trail at Russell Street. Striping is painted on Russell Street, and warnings signs have been placed at the crossing to alert motorists that bicycles and pedestrians cross at the intersection.

Milwaukee Corridor Trail - The Milwaukee Corridor Trail lies within the abandoned corridor of the Milwaukee Railroad between Russell Street, near the Dakota Street intersection, and Hickory Street. The trail, which is approximately one-half mile long, is an important component of the Missoula Bicycle Commuter Network, and intersects the Bitterroot Branch Trail near McCormick Park, which serves as a hub of Missoula's trail system. The City of Missoula owns



the trail and plans to extend the Milwaukee Corridor Trail west of Russell Street, to Reserve Street and the Clark Fork River, but plans are contingent on agreements with landowners in the area. The existing trail ends approximately 200 feet east of Russell Street and connects to Wyoming Street. Milwaukee Corridor Trail users who continue west cross Russell Street at the intersection of Russell Street and Wyoming Street.

Shady Grove Trail - The Shady Grove Trail is located parallel to the east side of Russell Street north of the Clark Fork Bridge. The trail turns east and extends approximately one-half mile along the riverfront to Burton Street. The City of Missoula owns the Shady Grove Trail and plans to extend the trail under the Russell Street Bridge.

Passive Green Spaces - The City of Missoula owns and maintains Kern and Hart Parks as passive green space. Kern Park is adjacent to the Bitterroot Branch Trail between Knowles and Russell Streets and is approximately 3,600 square feet in size. Hart Park is located adjacent to Russell Street at its intersection with Hart Street and is approximately 2,500 square feet. As these parks serve limited recreational purpose and are not significant to the City's recreational program due to their small size and location next to Russell Street, they are not protected by Section 4(f) of the U.S. Transportation Act (See Appendix E for Parks Department Concurrence).

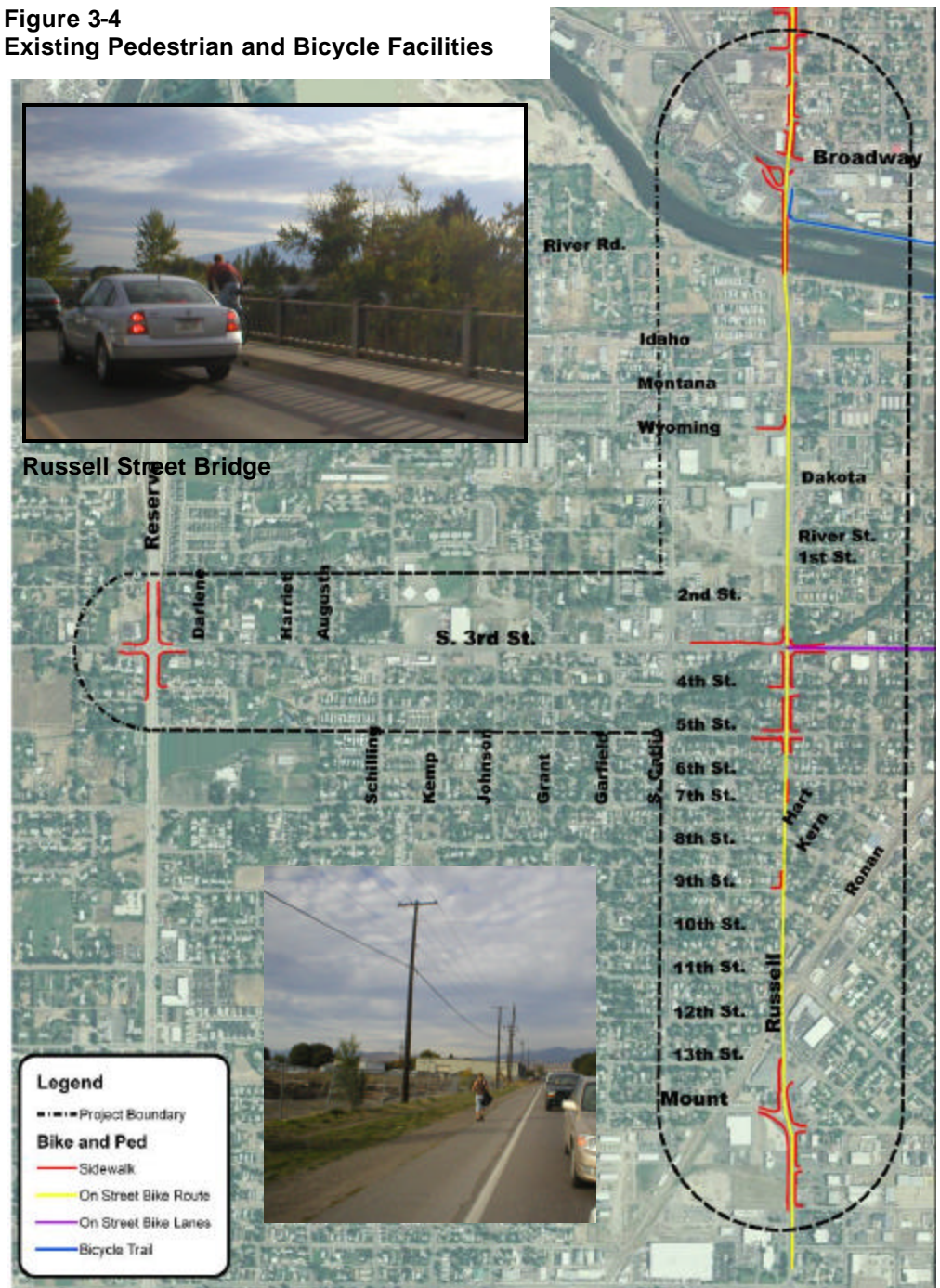
3.6 Pedestrian and Bicycle Conditions

This section describes the existing bicycle and pedestrian conditions in the study corridor. The condition of the existing bicycle and pedestrian facilities are based on observations, the 2004 *Missoula Transportation Plan Update*, and comments received during public involvement activities for this project.

Russell Street

Sidewalks are intermittent throughout the Russell Street corridor as illustrated in Figure 3-4. Pedestrian crossing facilities, including pedestrian signals, and handicapped accessible curb ramps, are located at the signalized intersections at Mount Avenue/South 14th Street, South 5th Street, South 3rd Street, and West Broadway Street. Russell Street is designated as an on-street bicycle route, and does not have bicycle lanes. Russell Street does have a paved shoulder from Mount Avenue/South 14th Street to South 5th Street on both sides of the street. There are also shoulders from South 3rd Street to the Clark Fork Bridge. The bridge has sidewalks on both sides. There are no paved shoulders on the north side of the bridge.

Figure 3-4
Existing Pedestrian and Bicycle Facilities





South 3rd Street

South 3rd Street has no designated bicycle or pedestrian facilities, except for crosswalks at two signalized intersections and at the intersections with Curtis and Catlin Streets. The signalized intersections are handicapped accessible, including curb ramps at all crossings. South 3rd Street has paved shoulders along both sides of the street from Curtis Street/ Schilling Street to Russell Street. There are no paved shoulders from Curtis Street to Reserve Street and there is a narrow paved shoulder on the south side of the street from Reserve Street to Schilling Street.

3.7 Air Quality

Air quality non-attainment and maintenance areas, such as the Missoula Metropolitan planning area, are subject to an air quality conformity determination by the Metropolitan Planning Organization, Federal Highway Administration and Federal Transit Administration in accordance with Federal Clean Air Act requirements, Environmental Protection Agency conformity regulations, Federal transportation planning requirements and State of Montana air quality rules, as pertain to conformity. The Clean Air Act was passed by Congress in 1970, amended in 1977 and again in 1990. The Clean Air Act of 1970 established six criteria pollutants for which the US Environmental Protection Agency was required to set National Ambient Air Quality Standards. These national air quality standards are federal health-based standards that set allowable concentrations and exposure limits for each of these six pollutants. Among these six are carbon monoxide and particulate matter.

The Environmental Protection Agency, Department of Environmental Quality, and the Missoula City-County Health Department regulate concentration of pollutants in the outdoor air and contaminant emissions from air pollution sources. Environmental Protection Agency standards are generally used to determine limits for pollutant concentration levels unless local standards are more stringent. The Missoula City-County Health Department maintains several monitoring stations in the City of Missoula that are located where air quality problems have the highest potential to occur. Data are collected at monitoring stations for a number of years and are used as a basis to determine whether air quality standards are met. The Department of Environmental Quality and the Environmental Protection Agency designate regions as being either attainment or non-attainment areas for each individual air pollutant. Attainment status is a measure of whether air quality in an area complies with the National Ambient Air Quality Standards.

The 1977 amendments defined “non-attainment” areas as localities where air pollution levels persistently exceed the National Ambient Air Quality Standards and require the development of State Implementation Plans that contain procedures to monitor, control, maintain, and enforce compliance with the National Ambient Air Quality Standards. Once the area can demonstrate consistent and projected compliance with the National Ambient Air Quality Standards, a petition may be submitted to the Environmental Protection Agency for redesignation as an attainment area under a maintenance plan. The Environmental Protection Agency may grant the petition dependent upon the submittal of a maintenance plan which will ensure that there are no future exceedances of the National Ambient Air Quality Standards. Upon approval, the area is then considered a maintenance area.

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The Transportation Conformity Rule of 1993 was developed as required by the Clean Air Act Amendments of 1990. This rule established the criteria and procedures by which the Federal Highway Administration, the Federal Transit Administration, and metropolitan planning organizations determine the conformity of federally funded or approved highway and transit plans, programs, and projects to existing State Implementation Plans. According to the Clean Air Act Amendments, federally supported activities must conform to the implementation plan purpose of attaining and maintaining the National Ambient Air Quality Standards.

Carbon Monoxide

Missoula was designated as a non-attainment area for carbon monoxide in 1978 because of repeated violations of the 8-hour average National Ambient Air Quality Standards in 1977 and early 1978. Most of the problem centered on a congested intersection, known as “Malfunction Junction,” where three major streets (Brooks Street, South Street and Russell Street) come together. Residential wood burning is also another major contributor to violations. The community took several steps to reduce the ambient levels of carbon monoxide, including intersection changes, woodstove regulations, and outdoor burning regulations. Missoula also relied on the federal motor vehicle emission reduction program to reduce carbon monoxide emissions. However, Missoula continued to violate the National Ambient Air Quality Standards until 1992, when it was required to implement an oxygenated fuels program during November, December, January, and February. Since the fuels program began in November 1992, Missoula has not recorded a violation of the National Ambient Air Quality Standards.

Between 1990 and 2000, carbon monoxide emissions in the Missoula area decreased by 40 percent. The biggest reductions were from on-road motor vehicles and woodstoves. However, in 2000, these two sources still represented over 95 percent of the carbon monoxide emissions in the non-attainment area. The remaining sources, industry, natural gas combustion, off-road vehicles and railroads, were responsible for less than five percent of the carbon monoxide emissions on a typical winter weekday.

On May 27, 2005, the Governor of Montana submitted to the Environmental Protection Agency the request from the Missoula City-County Air Pollution Control Board for the redesignation of Missoula County as a carbon monoxide attainment area. A comprehensive maintenance plan that met the requirements of the Clean Air Act was included in the submittal. On August 17, 2007, the Environmental Protection Agency published a final rule in the *Federal Register* (72 FR 46158) stating their approval of the State Implementation Plan revisions submitted by the State of Montana and the redesignation request submitted by the Governor. The Missoula carbon monoxide non-attainment area was redesignated to attainment effective September 17, 2007. In the same rulemaking, EPA also approved the carbon monoxide maintenance plan, which includes transportation conformity motor vehicle emission budgets for 2000, 2010, and 2020. The maintenance plan demonstrates that Missoula will continue to meet the National Ambient Air Quality Standards through the year 2020.

The maintenance plan provided for Missoula to continue to maintain the National Ambient Air Quality Standards and prevent backsliding by keeping essential programs in place, including stationary source permitting, outdoor burning permitting, solid fuel burning device restrictions,



and the oxygenated fuels program. These programs are contained within the Missoula City-County Air Pollution Control Program, are already a part of the State Implementation Plan, and were not revised.

Particulate Matter

The Missoula urban area has a history of exceeding the Montana and National Ambient Air Quality particulate standards. The first recorded exceedances for particulate were in 1969. Missoula was able to meet the federal annual average ambient air quality standard for particulate matter in terms of total suspended particulate in 1973 and again in 1975. However, violations of the daily total suspended particulate standard continued during the winter months, likely due to residential wood burning.

In July of 1987, the Environmental Protection Agency passed a standard for particulate matter with an aerodynamic diameter less than or equal to 10 microns, this new standard replaced the total suspended particulate standard. During the winter of 1986-1987, the Missoula City-County Health Department conducted a chemical mass balance study to apportion the sources of particulate matter in the valley. Residential wood smoke was 47 percent of the particulate matter during the study followed by road dust at 22.6 percent, motor vehicle exhaust at 10.2 percent and industry at 7.6 percent.

Missoula exceeded the annual average particulate matter standard in 1986 and exceeded the 24-hour particulate matter standard several times between 1987 and 1989. Because of these exceedances, Missoula was designated a non-attainment area for particulate matter and Montana was required to submit a State Implementation Plan to the Environmental Protection Agency to reduce particulate matter emissions in the valley. The State Implementation Plan specified that both the city and the county had adopted regulations on residential wood stoves, outdoor burning, industry, fugitive emissions, street sanding, and street maintenance. Missoula has not violated a federal particulate standard since 1989.

In January of 1999, Missoula began monitoring for fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns. National ambient air quality standards for fine particulate matter standard were promulgated by the Environmental Protection Agency on July 18, 1997, to address concerns that the previous particulate matter (PM_{10}) standards did not adequately protect human health. Because recent studies indicate that particulate matter in ambient air has health effects at lower concentrations than previously thought, on September 21, 2006, the Environmental Protection Agency revised the particulate matter standards.

The Missoula area is currently a non-attainment area for particulate matter (PM_{10}) due to past violations of the standards. Since Missoula is currently meeting the standards, the Missoula City and County Health Department has been preparing the documents necessary for the Environmental Protection Agency to redesignate the Missoula area from a “non-attainment area” to a “maintenance area” for particulate matter (PM_{10}). However, a study of the 2003-2005 fine particulate matter ($PM_{2.5}$) monitoring data collected in Missoula suggests that the city may be designated as non-attainment for fine particulate matter. Even so, recommendations from the states to the Environmental Protection Agency will be based on air monitoring data from 2004-

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2006. The designation status of Missoula for fine particulate matter (PM_{2.5}) will not be finalized until December 2009.

Fine particle pollution comes primarily from combustion sources such as woodstoves, outdoor burning, vehicle engines and industrial processes. Road dust and other types of dust also contribute to fine particulate in the air. In the winter months - when Missoula has the highest levels of pollution - dust is not as much of an issue because the ground is often wet or frozen. According to the *Missoula Montana PM_{2.5} Source Apportionment Research* report of November 2007, residential wood combustion was the largest source of fine particulate matter.

Mobil Source Air Toxics

The Environmental Protection Agency has identified a group of 21 mobile source air toxics (set forth in Environmental Protection Agency's final rule, *Control of Emissions of Hazardous Air Pollutants from Mobile Sources*) and extracted six priority Mobile Source Air Toxics considered to be priority transportation toxics. The Environmental Protection Agency has issued a number of regulations that will dramatically decrease Mobile Source Air Toxics through cleaner fuels and cleaner engines. According to a Federal Highways Administration analysis, even if vehicle miles of travel (VMT) increase by 64 percent, reductions of 57 percent to 87 percent in Mobile Source Air Toxics are projected from 2000 to 2020.

Under the Federal Highways Administration interim guidance issued for air toxic analysis in Environmental documents, the Preferred Alternative would be classified as a minor project for which the ultimate traffic level is predicted to be less than 150,000 average vehicles per day. The Environmental Protection Agency and Federal Highways Administration have acknowledged technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects and how this may prevent meaningful or reliable estimates of Mobile Source Air Toxic emissions and effects of specific projects. However, even though reliable methods do not exist to accurately estimate the health impacts of Mobile Source Air Toxics at the project level, it is possible to qualitatively assess the levels of future Mobile Source Air Toxic emissions.

Because the anticipated vehicle miles of travel under both the No Build and Preferred Alternative are nearly the same, it is expected that there would be no appreciable difference in overall Mobile Source Air Toxics emissions between the alternatives. The roadway widening proposed as part of the Preferred Alternative would have the effect of moving some traffic closer to nearby homes, schools and businesses; therefore, there may be localized areas where ambient concentrations of Mobile Source Air Toxics could be higher than the No Build Alternative. This localized impact could be offset due to increases in speeds and reductions in congestion (which are associated with lower Mobile Source Air Toxic emissions).

Overall, Environmental Protection Agency's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide Mobile Source Air Toxic levels to be substantially lower than today. Local conditions may differ from the national projections in terms of fleet mix and turnover, vehicle miles of travel growth rates, and local control measures; however, the magnitude of the Environmental



Protection Agency-projected reductions is so great (even after accounting for vehicle miles of travel growth) that Mobile Source Air Toxic emissions in the study area are likely to be lower in the future in nearly all cases.

3.8 Noise

According to the Federal Aid Policy Guide, *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (23 CFR 772), this project is defined as a Type I project as a “proposed Federal or Federal-aid highway project... which increases the number of through-traffic lanes and therefore a noise analysis is required.”

The noise analysis was conducted in accordance with the U.S. Code of Federal Regulations Part 772 (23 CFR 772) *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, and the Montana Department of Transportation’s *Traffic Noise Analysis and Abatement: Policy and Procedure Manual*. According to the noise study report, 56 noise-sensitive receptors on Russell Street were identified within approximately 490 feet of the existing roadway centerline, including single-family residences, mobile homes, apartments, townhomes, senior living apartments, and duplexes. The noise receptors for Russell Street are illustrated in Figure 3-5. An additional 44 noise receptors were identified for South 3rd Street and are depicted in Figure 3-6.

According to the Montana Department of Transportation, traffic noise impacts occur at residences if predicted traffic noise levels are 66 A-weighted decibels or greater in the project design year for the Preliminary Preferred Alternative, or if the predicted noise levels in the design year for the Preliminary Preferred Alternative are 13 A-weighted decibels higher than the noise levels in the current year for the No-Build Alternative. If either criterion is met, then an impact occurs, and traffic noise abatement measures need to be considered and determined if they are reasonable and feasible.

The City of Missoula Noise Control Ordinance (Missoula City Code Section 9.30) establishes maximum permissible noise levels for receivers 25 feet or greater from a noise source within a public right-of-way or the property line of a private property. For the purpose of this analysis, a receiver is a single-family residence or a multi-unit complex with four units or less. Noise limits are based on the zoning of the receiving property, and vary by the time of day. Noise levels in the ordinance may be exceeded by up to 10 decibels for up to 15 minutes of any one-hour period. There is no exemption in the City of Missoula Noise Control Ordinance for traffic traveling within rights-of-way, and it is subject to the same limits.

The Federal Highway Administration’s Traffic Noise Model Version 2.5 computer program was used to predict future traffic noise levels under a No-Build scenario to provide a baseline for future comparison. Table 3.4 lists existing and predicted noise levels for the Russell Street No-Build Alternative as compared to existing conditions.

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Figure 3-5
Russell Street Noise Receptor Locations

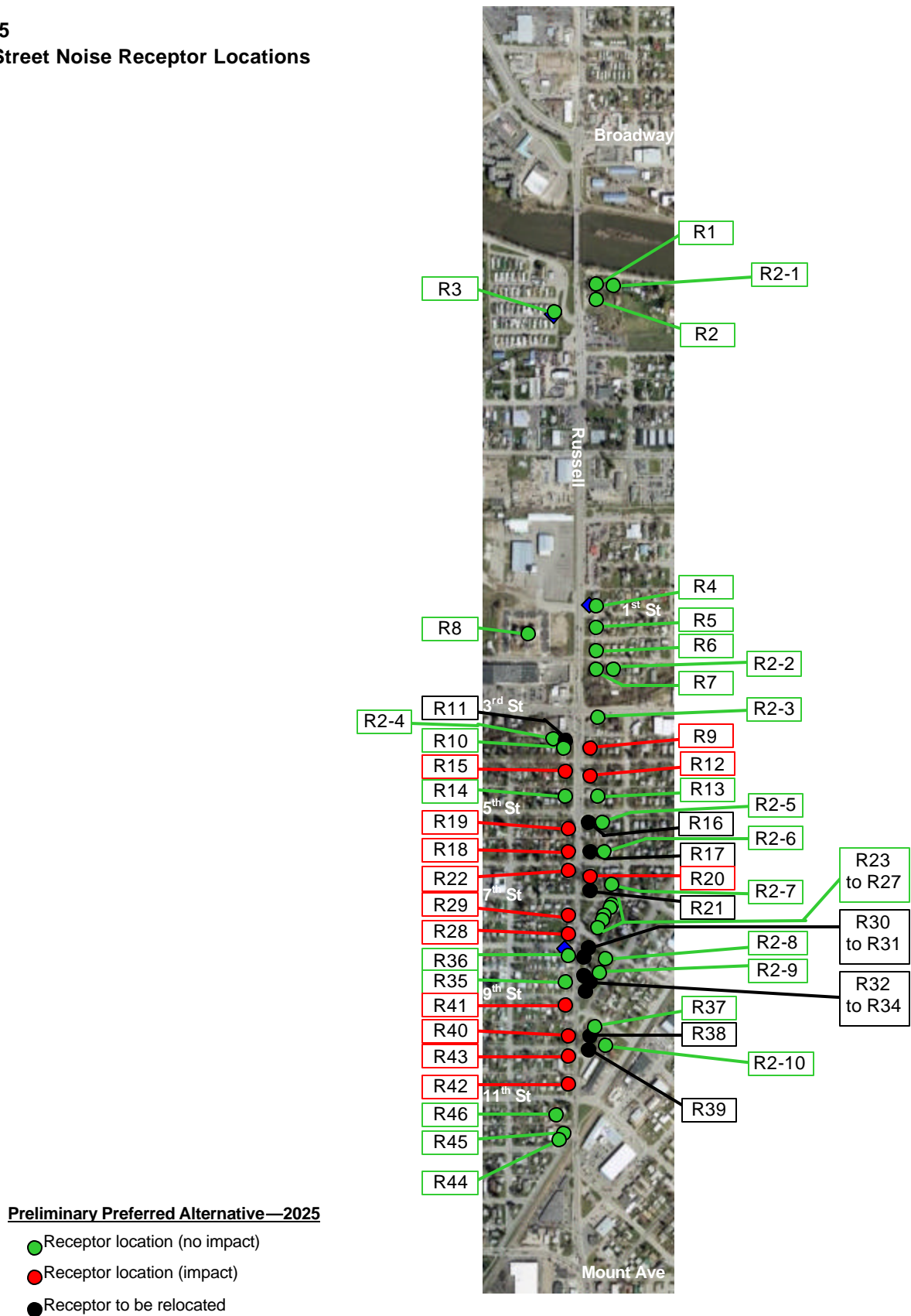
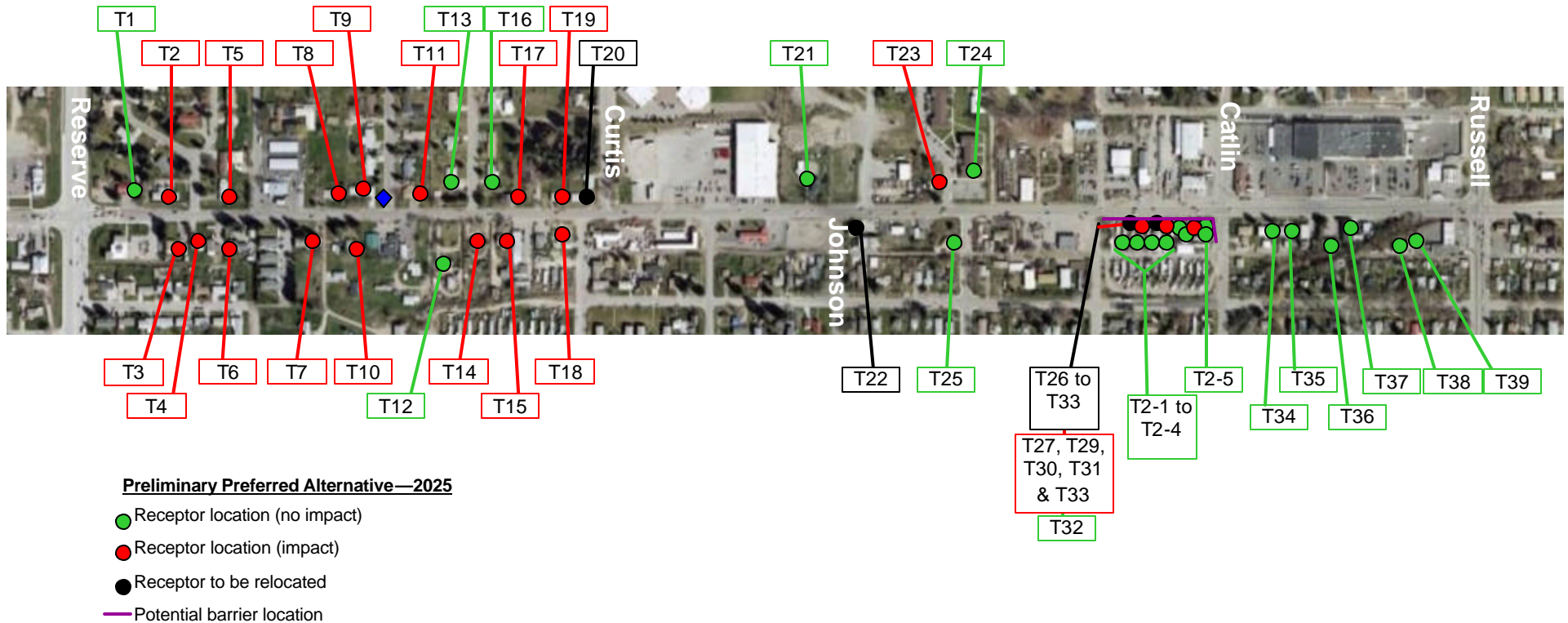




Figure 3-6
South 3rd Street Noise Receptor Locations



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56 receptor locations were evaluated along Russell Street for traffic noise impacts. As outlined in Table 3.4, the Montana Department of Transportation noise impact criteria is expected to be met or exceeded at 12 out of 56 receptor locations in the present year and at 22 receptor locations in the design year for the No Build Alternative along South 3rd Street.

Table 3.4
Russell Street
Receptors and Predicted Noise Levels for Existing and Future No-Build Conditions

Receptor	Description	Current Year Noise Levels	20-Year Forecast Noise Levels (No-Build)
West Broadway Street to South 1st Street			
R1	Single-family residence	62	63
R2	Single-family residence	62	64
R3	4 mobile homes	60	62
R2-1	Single-family residence, 2 nd row	60	62
R4	Single-family residence	63	65
South 1st Street to South 2nd Street			
R5	4 townhomes	58	60
R6	4 apartments (2 up/2 down)	63	65
South 2nd Street to South 3rd Street			
R7	4 apartments (2 up/2 down)	64	65
R8	Senior living apartments	58	60
R2-2	Single-family residence, 2 nd row	61	63
South 3rd Street to South 4th Street			
R9	Single-family residence	64	66
R10	Single-family residence	64	66
R11	Single-family residence	66	68
R2-3	Single-family residence, 2 nd row	62	63
R2-4	Single-family residence, 2 nd row	62	64
South 4th Street to South 5th Street			
R12	Single-family residence	64	65
R13	Single-family residence	62	63
R14	Single-family residence	63	65
R15	Single-family residence	65	67
South 5th Street to South 6th Street			
R16	Single-family residence	64	66
R17	Single-family residence	63	65
R18	Single-family residence	65	67
R19	2 Single-family residences	66	68
R2-5	Single-family residence, 2 nd row	60	62
R2-6	Single-family residence, 2 nd row	60	62
South 6th Street to South 7th Street			
R20	2 Single-family residences	63	65
R21	2 Single-family residences	64	65
R22	2 Single-family residences	65	67
R2-7	2 Single-family residences, 2 nd row	68	60
South 7th Street to South 8th Street			
R23	Single-family residence	58	60



Table 3.4
Russell Street
Receptors and Predicted Noise Levels for Existing and Future No-Build Conditions

Receptor	Description	Current Year Noise Levels	20-Year Forecast Noise Levels (No-Build)
R24	Single-family residence	59	60
R25	Single-family residence	69	61
R26	Single-family residence	60	62
R27	Single-family residence	61	63
R28	Single-family residence	66	67
R29	2 Single-family residences	66	67
South 8th Street to South 9th Street			
R30	Single-family residence	65	67
R31	Single-family residence	66	67
R32	Single-family residence	67	69
R33	Single-family residence	64	65
R34	Single-family residence	66	67
R35	Townhome (1 residence)	65	67
R36	Single-family residence	65	67
R2-8	Single-family residence, 2 nd row	58	60
R2-9	Single-family residence, 2 nd row	60	62
South 9th Street to South 10th Street			
R37	Single-family residence	62	64
R38	Single-family residence	63	65
R39	Single-family residence	65	66
R40	Single-family residence	66	68
R41	Single-family residence	66	68
R2-10	Single-family residence, 2 nd row	58	60
South 10th Street to South 11th Street			
R42	2 Single-family residences	67	68
R43	4 apartments (2 up/2 down)	66	68
South 11th Street to Mount Avenue/South 14th Street			
R44	Single-family residence	61	63
R45	Single-family residence	66	68
R46	Single-family residence	64	65
Total Impacts:		12	22

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44 receptor locations were evaluated along South 3rd Street for traffic noise impacts. As outlined in Table 3.5, the Montana Department of Transportation noise impact criteria is expected to be met or exceeded at 10 out of 44 receptor locations in the present year and at 20 receptor locations in the design year for the No Build Alternative along South 3rd Street.

Table 3.5
South 3rd Street
Receptors and Predicted Noise Levels for Existing and Future No-Build Conditions

Receptor	Description	No Build Alternative L _{eq} (h), Present Year 2000 (dBA)	No Build Alternative L _{eq} (h), Design Year 2025 (dBA)
Reserve Street to Schilling/Curtis Streets			
T1	Single -family residence	63	65
T2	Duplex (2 residences)	65	67
T3	Single -family residence	63	65
T4	Single -family residence	64	66
T5	Single -family residence	65	67
T6	2 Single -family residences	63	66
T7	4 apartments (2 up/2 down)	63	66
T8	Single -family residence	65	67
T9	Duplex (2 residences)	64	66
T10	Single -family residence	63	65
T11	Duplex (2 residences)	65	67
T12	3 Single -family residences	60	62
T13	Single -family residence	63	65
T14	Single -family residence	63	65
T15	Single -family residence	64	66
T16	Single -family residence	62	65
T17	Single -family residence	66	68
T18	Mobile home	65	67
T19	Single -family residence	66	68
T20	Single -family residence	66	68
Schilling/Curtis Streets to Johnson Street			
T21	Single -family residence	62	64
T22	2 apartments (1 up/1 down)	67	68
Johnson Street to Catlin Street			
T23	Single -family residence	64	65
T24	6 apartments (2-3 rd floor, 2-2 nd floor, 1-1 st floor)	63	64
T25	Single -family residence	64	65
T26	2 Mobile homes	67	69
T27	Mobile home	66	68
T28	Mobile home	68	69
T29	Mobile home	67	68
T30	Single -family residence	65	66
T31	Mobile home	66	68
T32	Single -family residence	65	66
T33	Mobile home	66	68
T2-1	Mobile home, 2 nd row	63	64
T2-2	2 Mobile homes, 2 nd row	63	64



Table 3.5
South 3rd Street
Receptors and Predicted Noise Levels for Existing and Future No-Build Conditions

Receptor	Description	No Build Alternative L_{eq}(h), Present Year 2000 (dBA)	No Build Alternative L_{eq}(h), Design Year 2025 (dBA)
T2-3	2 Mobile homes, 2 nd row	63	64
T2-4	3 Mobile homes, 2 nd row	63	64
T2-5	Mobile home, 2 nd row	63	64
Catlin Street to Russell Street			
T34	Duple x (2 residences)	63	65
T35	Duplex (2 residences)	63	65
T36	4 apartments (2 up/2 down)	61	62
T37	4 apartments (2 up/2 down)	63	65
T38	4 apartments (2 up/2 down)	60	61
T39	4 apartments (2 up/2 down)	60	62
Total Impacts:		10	22

3.9 Water Quality

This section provides an overview of the existing water quality conditions of water resources in the study area. Much of the following information on the Middle Clark Fork watershed was obtained from the Montana Department of Environmental Quality internet site.

Surface Water

The major surface water feature in the project area is the Clark Fork River, which intersects the project corridor at the Russell Street Bridge. Under authority of Section 303(d) of the Clean Water Act, several sections of the Clark Fork River are included on the Montana Department of Environmental Quality 2002 list of impaired and threatened water bodies, including a section within the project area. The Clark Fork River is considered water quality-limited. Water quality-limited waters are lakes and stream segments that do not meet, or are not expected to meet, state water quality standards. Under the terms of the Clean Water Act, states were directed to develop total maximum daily loads that set limits on point and non-point source pollution loading to water quality-limited bodies. Total maximum daily loads have not yet been developed for the Clark Fork River. According to the Montana Department of Environmental Quality, the Clark Fork River from Warm Springs Creek to the Flathead River, which includes the study area, is on the high priority list for development of total maximum daily loads in Montana.

According to the Environmental Protection Agency website, immediate risks to public health from a contaminated drinking water supply have been temporarily addressed. With the implementation of the Milltown Reservoir Sediments Record of Decision, the Environmental Protection Agency expects the Milltown drinking water supply to be cleaned up permanently.

Stormwater

Stormwater drainage systems in the area are somewhat limited under existing conditions. Most stormwater leaves the roadways as sheet flow. Some stormwater leaves the roadway and flows into small infiltration systems (drywells). A small amount of runoff from the project area is conveyed directly to the main Missoula Irrigation District channel that intersects the study area at the Russell Street/South 3rd Street intersection. In addition, runoff from the Russell Street Bridge drains directly to the Clark Fork River.

Ground Water

The Missoula Valley Aquifer is the primary groundwater resource of the Missoula Valley and project area. Drinking water for 80 percent of Missoula County residents is supplied from groundwater from the Missoula Valley Aquifer. This Missoula Valley Aquifer is designated as a “sole source aquifer” under Section 1424(e) of the Safe Drinking Water Act. This designation made at the request of the Missoula City-County Health Department in 1988, provides for Environmental Protection Agency review of federal financially assisted projects to assure that such federally assisted projects do not contaminate an aquifer that is the sole or principle source of drinking water for an area.



Within the Missoula Valley Water Quality District, the City of Missoula adopted the *Missoula Valley Water Quality Ordinance* in June 2001. This ordinance is intended to protect the public health, safety, and general welfare of those utilizing the Missoula Valley Aquifer and surface water in the Missoula Valley for drinking water, recreation, and other beneficial uses. As such, it establishes prohibitions and restrictions to prevent surface water and groundwater contamination.

The Missoula Valley Aquifer is a shallow, highly transmissive, unconfined alluvial aquifer which extends along the Clark Fork River Valley. Recharge of the aquifer is provided from stream water seepage from the Clark Fork River and from precipitation which falls on the ground surface and eventually percolates through the alluvial deposits of the Clark Fork River Valley. These alluvial materials filter contaminants from the percolating water. Other recharge sources include:

- Direct precipitation on the aquifer.
- Discharge from the adjacent hydrostratigraphic units
- Stormwater runoff.
- Septic Systems.
- Leakage from irrigation ditches.

Much of the precipitation within the Missoula area is intercepted by impervious surfaces, such as rooftops and road and parking lot pavement. To minimize direct discharge to surface waters, such as the Clark Fork River, the runoff from the impervious surfaces is conveyed to “dry wells” or sumps that have been established by the City of Missoula within the city limits. The dry wells or sumps collect and direct the surface runoff in to the alluvial materials and, after percolating through the alluvial materials, the runoff eventually reaches the Missoula Valley Aquifer.

3.10 Wetlands

Wetland determinations for the project area were performed in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual. No jurisdictional wetlands were found within the project corridor.

3.11 Water Bodies and Wildlife Habitat

Aside from the Clark Fork River (described in the previous Water Quality section), there are no other natural streams or channels in the study area; therefore, this section focuses primarily on existing irrigation ditches and wildlife habitat in the study area.

Based on the recent Talent Water Decision (2001), the U.S. Army Corps of Engineers considers irrigation ditches as jurisdictional “Waters of the United States” under Section 404 of the Clean Water Act if they have a downstream surface connection to other waters of the United States and/or jurisdictional wetlands. Three irrigation districts lie within or coincide with the study area: the Missoula Irrigation District, Orchard Homes Ditch Company, and Hellgate Valley

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Irrigation Company (Flynn-Lowney Ditch). The Hellgate Valley Irrigation Company and the Missoula Irrigation District have downstream surface connections to other waters of the U.S. and would be considered jurisdictional by the Corps of Engineers. Figure 3-7 illustrates the location of these ditches in the proximity of the study area.

Each of these three irrigation districts currently gains access to the ditches for maintenance through prescriptive easements. No permanent access points or roadways exist for maintenance personnel from Russell Street or South 3rd Street. There are no plans by the irrigation district to expand or improve the existing facilities in or near the project corridor.

Wildlife

According to the *Biological Resources Report* prepared for this proposed project, wildlife habitat within the project area consists primarily of disturbed (human-altered), urban, and riparian habitat associated with the Clark Fork River offering little natural wildlife habitat. Landscaping along the roadways provides habitat for some wildlife species adapted to the urban environment. Riparian habitat exists along the Clark Fork River, which bisects Russell Street between River Road and West Broadway Street at the northern terminus of the proposed project.

Wildlife use of the project area is greatly influenced by the high level of development in and around the project area. The Clark Fork River intersects the study area and provides habitat for a number of wildlife species. Some species may use the river corridor to travel from one part of the Missoula Valley to another. Other species are adapted to living in an urban environment and use habitat in the project area on a year-round basis.

According to the *Biological Resources Report*, several species of waterfowl frequent the Clark Fork River corridor and great blue herons often set up rookeries in the area; however, there are currently no heron rookeries in the project area.

A variety of small to medium mammals, several bat species, and amphibian and reptile species are expected to reside within the project area. Large herbivores also pass through the project vicinity and occasionally reside in the project area.

Figure 3-7
Irrigation Ditches Intersecting Study Area



Species of Concern

According to the Biological Resources Report, there are no recorded plant species of concern within the project area, but seven records of rare or sensitive wildlife species in the Missoula area; however, the proposed project area lacks suitable habitat and the Montana Natural Heritage Program database lists the occurrence of these species as unlikely.

Noxious Weeds

Invasive species typical of disturbed areas, such as spotted knapweed, are present in the study area. Herbaceous species, such as sedges and rushes, also exist in the riparian area but are not dominant.

3.12 Floodplains

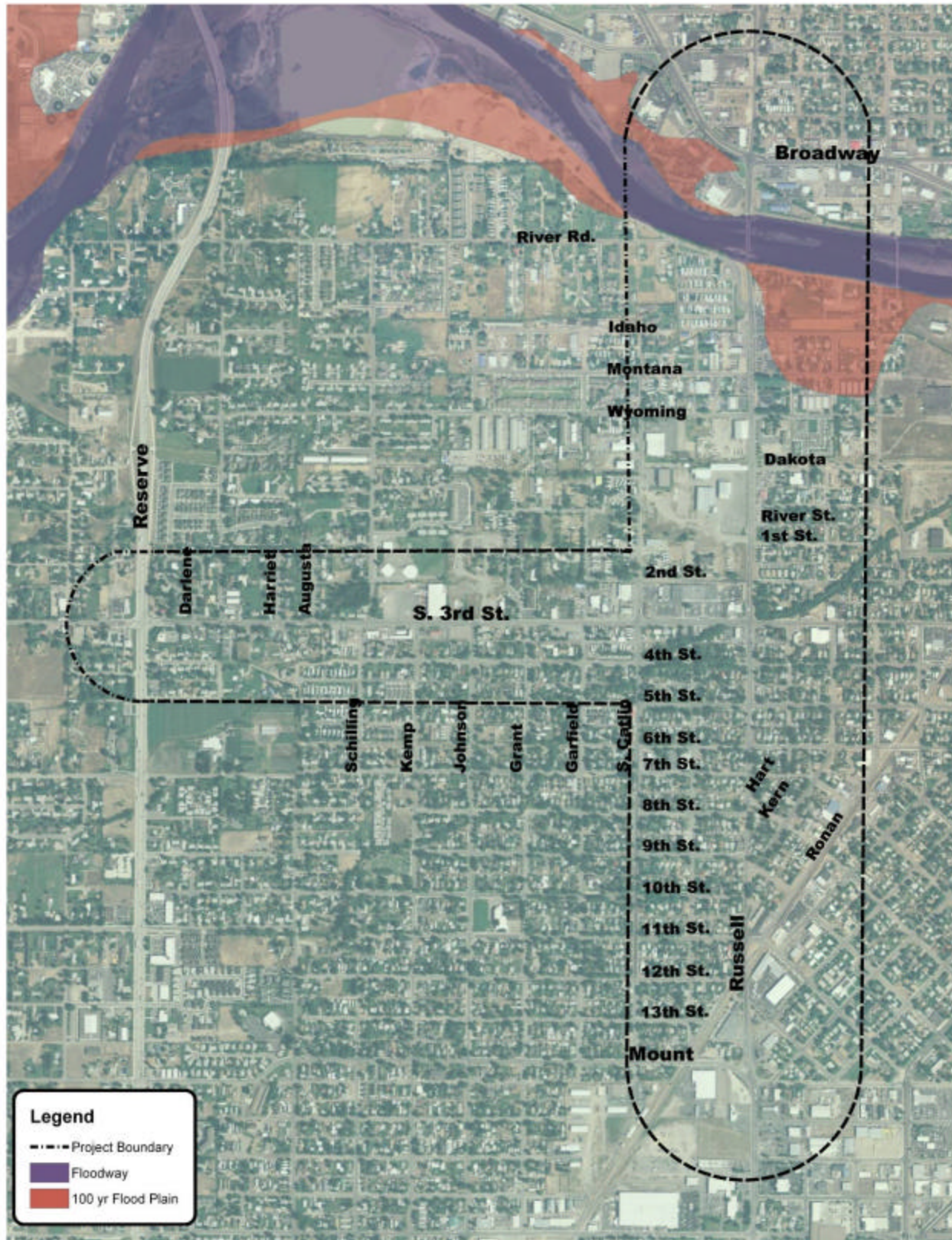
The Clark Fork River bisects Russell Street between River Road and West Broadway Street in the northern portion of the study area. Flood control measures that have been implemented along this river reach include filling and rip-rapping of banks and removing riparian vegetation. Approximately 60 percent of the Clark Fork River reach between East Missoula and the Reserve Street Bridge has been confined by bank stabilization projects. This reach is approximately 4.5 miles in length and incorporates the urban portion of the river, including the Russell Street Bridge area.

As shown in Figure 3-8, Russell Street is in close proximity to the Clark Fork River floodplain from approximately Montana Street north to West Broadway Street, including the crossing of the floodway with the Russell Street Bridge. The floodplain boundary is in closest proximity to the existing roadway near the southern end of the bridge and in the southwest quadrant of the Russell Street / West Broadway Street intersection.

The width of the floodplain and floodway, which are concurrent at the bridge, is approximately 400 feet at that location.



Figure 3-8
Clark Fork River 100-year Floodplain



3.13 Threatened and Endangered Species

According to the Biological Resources Report prepared for this proposed project, there are five federally-listed threatened and endangered species that have the potential to occur in the project area. Only the bull trout and the bald eagle are anticipated to occur within the study area and are discussed below.

Bull Trout – (*Threatened*)

The bull trout was listed by the U.S. Fish and Wildlife Service as a threatened species in 1998. Bull trout in the middle Clark Fork River drainage presently are uncommon to rare. Numbers of bull trout in this section of the Clark Fork River are too low to estimate.

The Clark Fork River has been identified as nodal habitat for bull trout. Nodal habitats are defined as waters that provide migratory corridors, over wintering areas, or are otherwise critical to the population at some point in its life history. The primary risks to bull trout in the Middle Clark Fork River system are the main stem river dams, which limit bull trout migration, and water quality degradation related to agricultural practices, and past and potential timber harvest. The Milltown Dam is located approximately nine miles upstream of the Russell Street Bridge. Until its demolition and removal, this dam is a barrier to upstream fish passage, limiting bull trout access to spawning areas. A dam on Rattlesnake Creek, upstream of the project area, was also a barrier to fish passage until recently when a ladder was installed. The Clark Fork River is not included in the listing of critical habitat for bull trout.

Bald Eagle – (*De-listed*)

The Bald eagle was originally listed as endangered in 1967, but recovery efforts led to increased numbers and an expanded range for the eagles. In 1995, the bald eagle was down-listed to threatened status, and was de-listed as of the summer of 2007.

According to the Biological Resources Report prepared for this proposed project, bald eagles are known to use habitat along the Clark Fork River near Missoula as spring or fall migrants. Bald eagles may be present along the Clark Fork River at any time of year; however, heaviest use within the project corridor is during winter months. Bald eagles use habitat along the Clark Fork River near Reserve Street (approximately one mile west of Russell Street), primarily during the winter months for perching, foraging, and roosting. Bald eagles have been observed fishing in the river and resting in the cottonwood trees on the island complex near the Orange Street Bridge, approximately one mile east of the Russell Street Bridge.

According to the Biological Resources Report, there are currently no bald eagles nesting within the project area.



3.14 Historic and Cultural Resources

Three historic and cultural resource inventories were completed to determine whether properties in the study area were eligible for listing on the National Register of Historic Places (NRHP). The cultural resource reports referenced in this historic and cultural resources section are available from the Montana Department of Transportation and the City of Missoula.

According to the Montana State Historic Preservation Officer, a total of 33 properties are eligible for listing on the National Register of Historic Places in the Russell Street and South 3rd Street project corridors and are listed in Table 36. (See also, concurrence letter in Appendix C). Additionally, two potential historic districts were identified within the study area. The Orchard Homes subdivision on South 3rd Street west of Reserve Street was identified as eligible for listing on the NRHP as a potential historic district. Three properties within the potential Orchard Homes Historic District were identified as individually eligible for listing on the National Register of Historic Places. Fourteen properties on South 3rd Street east of Russell Street were identified as eligible for listing on the National Register of Historic Places as contributing components of a potential historic district.

There are three historic irrigation ditches located within the project area. The ditches were evaluated by the Montana Department of Transportation for eligibility for listing on the National Register of Historic Places and were determined to be ineligible. The Montana State Historic Preservation Officer has concurred with this determination.

Figures 3-9 and 3-10 illustrate the locations of properties eligible for listing on the National Register of Historic Places. The majority of the sites identified are located in the southern portion of the Russell Street corridor, and at the ends of the South 3rd Street corridor.

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Table 3.6
Sites Eligible or Listed on the National Register of Historic Places

Site Number	Street Address/Location
24MO718	Bitterroot Branch of the Northern Pacific Railroad
24MO796	1436 South 4 th Street
24MO798	1501 South 4 th Street
24MO800	1508 South 5 th Street
24MO801	1501 South 5 th Street and 715 Russell Street
24MO805	1502 South 6 th Street
24MO811	824 Russell Street
24MO812	1501 South 7 th Street
24MO814	1500 South 8 th Street
24MO819	941 Kern Street
24MO820	1135 Russell Street
24MO822	1500 ½ South 11 th Street
24MO823	1501 South 11 th Street
24MO842	1038 South 3 rd Street
24MO843	1046 South 3 rd Street
24MO845	1102 South 3 rd Street
24MO849	1133 South 3 rd Street
24MO850	1135 South 3 rd Street
24MO852	1202 South 3 rd Street
24MO853	1203 South 3 rd Street
24MO855	1221 South 3 rd Street
24MO856	1225 South 3 rd Street
24MO858	1229 South 3 rd Street
24MO859	1230 South 3 rd Street
24MO860	1250 South 3 rd Street
24MO861	1256 South 3 rd Street
24MO862	1262 South 3 rd Street
24MO881	2537 South 3 rd Street
24MO882	2540 South 3 rd Street
24MO884	2601 South 3 rd Street
24MO885	2608 South 3 rd Street
24MO891	Potential South 3 rd Street Historic District
24MO892	Potential Orchard Homes Historic District

Figure 3-9
Sites Listed or Eligible for Listing on the National Register of Historic Places
(Russell Street – Mount Avenue to South 3rd Street)



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Figure 3-10

Sites Listed or Eligible for Listing on the National Register of Historic Places
(South 3rd Street – Reserve Street to Russell Street)



3.15 Hazardous Materials

According to the Hazardous Materials Technical Memorandum prepared for this proposed project, the area contains over 150 sites that could contain hazardous materials. Montana leaking underground storage tank files were the only regulatory files reviewed, since they were the only release sites identified by the database search. Upon further review, there are 17 sites that contain Underground Storage Tanks, and only eight sites that have records of Leaking Underground Storage Tanks within the study area. Figure 3-11 illustrates the general location of both existing Underground Storage Tanks and Leaking Underground Storage Tanks in the immediate vicinity of Russell and South 3rd Streets. Additionally, petroleum hydrocarbon release has been documented at several sites within the project corridor. Specific contamination at each of these sites is unknown without further investigation, but there is a potential for construction and long-term impacts.

Figure 3-11
Underground Storage Tank Sites



Other hazardous materials may be encountered, including asbestos and lead contamination in structures that would be acquired by the proposed project. Furthermore, The Russell Street Bridge was built during a time period when all steel structures of its type were painted with a lead based paint. It is likely that remediation measures will have to be performed in order to minimize environmental impacts.

3.16 Visual Resources

Missoula is situated in a valley surrounded by the Rattlesnake Wilderness area to the north, the Bitterroot Mountain Range to the south and west, and Mount Jumbo and Mount Sentinel to the east. The contours of Russell Street and South 3rd Street are mostly straight and flat, with slight deviations in a few areas. The area has a commercial character with residential areas interspersed and generally lacks substantial focal points such as medians or landscaped areas along the roadways. Curbs and landscaping occur occasionally within the project corridor, which contribute to an undefined appearance along the roadway. Vegetation is mostly limited to residential lots. The visual character of Russell and South 3rd Streets includes traffic signals, street lights, roadway and commercial signage, and utility lines and poles. The absence of sidewalks along South 3rd Street and the incomplete segments of sidewalks along Russell Street decrease visual unity and definition within the corridor.

The following sections describe the visual resources associated with each portion of the project.

Russell Street (Mount Avenue to South 3rd Street)

Views on the road include a multilane intersection, adjacent commercial structures, overhead power lines, and signage at Russell Street and Mount Avenue/South 14th Street. A few businesses have landscaped areas adjacent to Russell Street, but vegetation is mostly limited to residential lots. The road narrows to two lanes as it enters the primarily residential neighborhood between Lawrence and South 6th Streets. Overhead power lines continue through the residential neighborhood, but the absence of commercial structures and signage offers unified views in this area.

Viewers away from the road are exposed to foreground and midground views similar to those experienced by viewers on the road, but background views of the corridor include mostly unobstructed views of the mountains to the north, south, east, and west. Large deciduous trees, which are abundant within residential areas along this segment, are visible away from the road.





Russell Street (South 3rd Street to West Broadway Street)

Views from this portion of the road include a three-lane road with a predominantly commercial setting. Views in this segment are not unified and are characterized by extensive signage and commercial structures. Away from the road, foreground and midground views of commercial areas are interspersed with a few residential structures. There are background mountain views to the north, south, east, and west. Near the Russell Street Bridge, there are relatively unobstructed views of the Clark Fork River and the surrounding mountains.



South 3rd Street

This portion is generally characterized by commercial and residential sites. Views from the road include commercial and residential structures, parking lots, signage, utility lines, and poles. Away from the road, there are background views of the mountains surrounding the Missoula Valley, which are partially obscured by commercial and residential buildings and urban infrastructure.



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4.0 ENVIRONMENTAL CONSEQUENCES & MITIGATION

This chapter provides an analysis of the potential beneficial and adverse social, economic, and environmental effects of the alternatives under consideration, and describes the measures proposed to mitigate adverse impacts. Each section provides the scientific and analytical basis for evaluating the comparative merits of providing no transportation improvements in the study area to providing safety and mobility improvements in both the Russell Street and South 3^d Street corridors.

Based on the summary comparison of alternatives provided in Chapter 2, the No Build Alternative, Alternatives 4, 5, and a refined Alternative 5 on Russell Street, and Alternatives B, C, D, and E on South 3^d Street have been forwarded for more detailed analysis. Because the general footprint of the Build alternatives is very similar, differences in impacts between them are minor, and are generally isolated to differences around the intersections. Where possible, the impacts are described in general terms in the following sections. Specific distinctions are made between alternatives where there are important differences between impacts.

4.1 Land Use Impacts

No Build Alternative

Aside from the opportunity for some infill development and large lot redevelopment at the old Intermountain Lumber site, land use along the proposed project corridor is not expected to change if the No Build Alternative is selected. Under the No Build Alternative, no improvements to infrastructure would be made and the lack of sidewalks, curbs, and bicycle lanes would remain.

All Build Alternatives

Existing land uses are not expected to change in the project area as a result of this proposed project; however, the addition of travel lanes would require the acquisition of new right-of-way from existing residential and business property owners. The right-of-way necessary at some locations would require the acquisition of the complete parcel, resulting in the permanent displacement of existing homes or commercial buildings. Displacements are discussed in Section 4.3 – Social Impacts, below.

Based on the concern expressed by the public that Russell Street not evolve into another Reserve Street, it is important to note that the roadway improvements alone would not change the land use within this corridor. While improved access and mobility may make adjacent properties more desirable, ultimately, the growth and land use changes adjacent to the project corridor are dictated by the City zoning and land use plans which restrict the density and types of development that may occur. The interconnected nature of transportation investment and land use is discussed further in Section 4.16 – Cumulative Impacts.

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Consistency with Plans, Policies, and Regulations

The proposed project is consistent with the urban centers developed in the *Missoula Urban Comprehensive Plan–1998 Update*. While the urban centers concept was developed primarily to reduce traffic congestion, it also has potentially beneficial social impacts in promoting pedestrian-oriented neighborhoods.

Preliminary Preferred Alternatives

There are minimal differences in land use impacts between the Preliminary Preferred Alternatives and any of the other Build alternatives.

Mitigation

No impacts on land use are expected as a result of this project. No land use mitigation is proposed or required under the Preliminary Preferred Alternatives.

4.2 Farmland Impacts

There are no farmlands in the Russell Street and South 3rd Street project corridors. No mitigation is proposed or required.

4.3 Social Impacts

No Build Alternative

Under the No Build Alternative, Russell and South 3rd Streets would remain unchanged. The No Build Alternative would result in worsening congestion and increasing difficulty of residential and business access, as well as a hindrance on the operation of emergency response vehicles, including fire, police, and medical aid.

All Build Alternatives

Right-of-way Acquisitions and Relocations

Right-of-way would be required throughout much of the corridor to accommodate the proposed improvements under any of the Build alternatives. Table 4.1 provides a comparative summary of the proposed right-of-way impacts on residential properties and community facilities within the Russell Street corridor. Details on South 3rd Street follow the table.



Table 4.1
Summary Comparison of Impacts to Residences and Community Facilities on Russell Street

Section	Alternative 4	Alternative 5	Alternative 5 (Refined)
Mount Avenue to South 11th Street	<ul style="list-style-type: none"> • 0.73 acres new right-of-way 	<ul style="list-style-type: none"> • 1 Homes • 1 4(f) Properties* • 1.02 acres new right-of-way 	<ul style="list-style-type: none"> • 0.71 acres new right-of-way
South 11th Street to South 3rd Street	<ul style="list-style-type: none"> • 11 Homes • 3 4(f) Properties* • 1.65 acres new right-of-way 	<ul style="list-style-type: none"> • 17 Homes • 5 4(f) Properties* • 2.01 acres new right-of-way 	<ul style="list-style-type: none"> • 12 Homes • 4 4(f) Properties* • 1.71 acres new right-of-way
South 3rd Street to Wyoming Street	<ul style="list-style-type: none"> • 0.93 acres new right-of-way 	<ul style="list-style-type: none"> • 0.84 acres new right-of-way 	<ul style="list-style-type: none"> • 0.63 acres new right-of-way
Wyoming Street to Russell Street Bridge	<ul style="list-style-type: none"> • 0.37 acres new right-of-way 	<ul style="list-style-type: none"> • 0.71 acres new right-of-way 	<ul style="list-style-type: none"> • 0.40 acres new right-of-way
Russell Street Bridge to West Broadway	<ul style="list-style-type: none"> • 0.64 acres new right-of-way 	<ul style="list-style-type: none"> • 0.79 acres new right-of-way 	<ul style="list-style-type: none"> • 0.66 acres new right-of-way
Totals	<ul style="list-style-type: none"> • 11 Homes • 3 4(f) Properties* • 4.32 acres new right-of-way 	<ul style="list-style-type: none"> • 16 Homes • 6 4(f) Properties* • 5.38 acres new right-of-way 	<ul style="list-style-type: none"> • 12 Homes • 4 4(f) Properties* • 4.11 acres new right-of-way

*In addition to the 4(f) properties listed in the table, 3 trails and a historic railroad line will also be impacted.

Summary Comparison of Impacts to Residences and Community Facilities on South 3rd Street

Section	Alternative B	Alternative C	Alternative D	Alternative E
Reserve Street to Russell Street	<ul style="list-style-type: none"> • 3 Homes • 2.38 acres of new right-of-way 	<ul style="list-style-type: none"> • 3 Homes • 2.77 acres of new right-of-way 	<ul style="list-style-type: none"> • 2 Homes • 3.62 acres of new right-of-way 	<ul style="list-style-type: none"> • 2 Homes • 2.63 acres of new right-of-way

Although the housing vacancy rate in Missoula was less than two percent, at the outset of this study there were 340 active residential listings in Missoula. Approximately 420 units have been built in the County each year since 1995. It is likely that the displaced residents would be able to find alternative housing. For any acquired properties, the terms of Title VI of the Civil Rights Act of 1964 that ensure equal rights and equal protection under the law would apply. In the event that residential property is acquired for the project, it would be purchased for fair market value and in compliance with the Uniform Relocation Act of 1970 and Sections of the City of Missoula's Real Property Acquisition and Relocation Policy, Procedures and Guidelines.

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Environmental Justice

Displacement of these residents may be necessary due to the general widening of both Russell Street and South 3^d Street. Measures to minimize harm were taken into consideration. All displaced residents will be provided with relocation assistance as provided by the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*.

Beyond assistance afforded to any dislocated person, no special mitigation would be required from an Environmental Justice standpoint. From guidance provided in the Department of Transportation's Final Environmental Justice Strategy, it can be determined that there are no "disproportionately high and adverse effects on minority or low-income populations." This determination was made based on the following criteria:

- The adverse impact from the project is **not** predominantly born by a minority population and/or low-income population; and,
- The adverse impact suffered by the minority or low-income population is **not** more severe or greater in magnitude than the adverse impact that will be suffered by the non-minority population and/or non-low-income population.

Community and Public Facilities

Under all of the Build alternatives, traffic flow and emergency vehicle response time would improve. Increased road width and additional travel lanes would minimize conflicts with emergency vehicles in comparison to the No Build Alternative. Fire and emergency response vehicles would have the option to use Opticom at signalized intersections which could allow emergency response vehicles to move through an intersection a few seconds faster than at a signalized intersection without Opticom.

When considering the social impacts of the proposed roadway project, the Federal Highway Administration is generally concerned about community cohesion, splitting neighborhoods, and separating residents from community facilities. Impacts to school districts, recreational areas, services, and community amenities are also of concern.

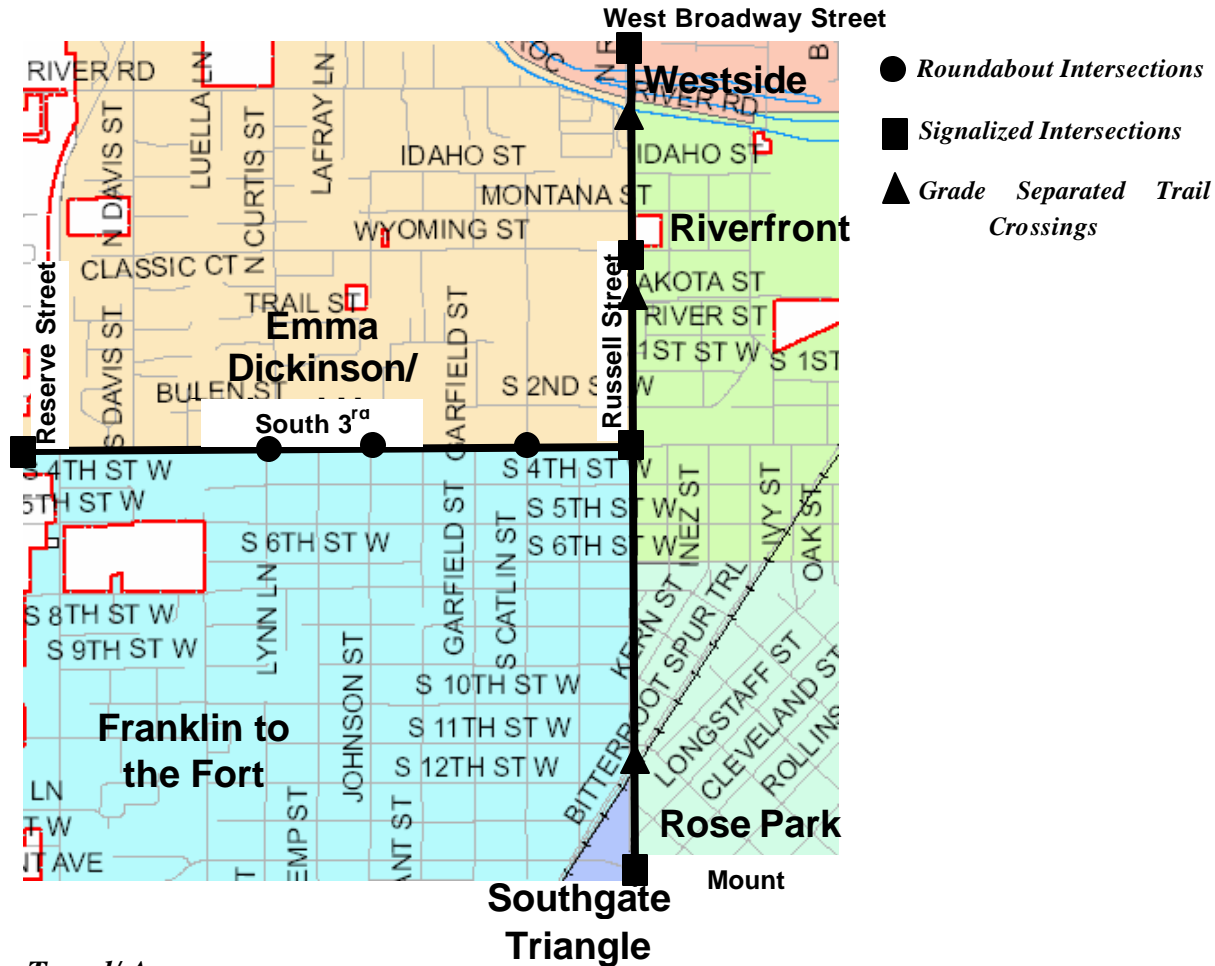
As discussed in Chapter 3, both Russell Street and South 3rd Street have historically established the edges of several neighborhoods and school districts, and only one such jurisdictional boundary crosses Russell Street. Given that Russell Street is an urban arterial, and is intended to serve both local and regional traffic, and currently marks the edge of these neighborhoods and districts, the proposed improvements would not split neighborhoods, isolate any portion of an existing neighborhood, or separate residents from community facilities within their neighborhoods.

It is anticipated that the proposed project would have an overall positive effect on neighborhood connectivity through the installation of sidewalks, bike lanes, and grade-separated pedestrian crossings at three locations within the Russell Street corridor. These proposed amenities are intended to knit these separate neighborhoods into a more cohesive community by providing



safer and more aesthetic opportunities to cross existing real and perceived boundary lines. These connections are depicted in Figure 4-1.

Figure 4-1
Neighborhood Connectivity within Project Corridor



Travel/ Access

Access will be limited to entering right-turns and exiting right-turns at driveways and cross streets affected by raised medians. Motorists desiring to turn left would be accommodated through u-turns at roundabouts or at open intersections, or by turning in advance of the access point. Additional breaks in the median would be considered during the final design of the proposed project. While these medians are intended to improve the overall operation of Russell Street and South 3rd Street, they will result in a change from current driving patterns and behaviors. The ultimate impact is considered to be positive, thus no mitigation would be proposed.

Figure 4.2 illustrates those properties that may require full acquisition under the Preliminary Preferred Alternatives based on the unavoidable conflicts with the structures.

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Table 4.2
Detailed Right-of-way impacts on Residential Properties from the Preliminary Preferred Alternatives

Full Acquisition*	Less than 5 feet from structure	5 to 10 feet from structure	10 to 15 feet from structure	15 to 20 feet from structure
<i>Russell Street</i>				
521 Russell St. (1)	820 Russell St.	1439 4th St. W	1431 3rd St.	915 Russell St.
1445 5th St. (2)	1508 S. 5 th St.	1501 5th St.	1501 4th St. W	1501 1500 ½ 7 th St.
802 Russell St. (3)	1436 S. 4 th St	738 Russell St.	1502 6th St. W	1501 9th St. W
824 Russell St. (4)		808 Russell St.	1501 6th St. W	1135 10th St. W
1000 Russell St. (5)		1501 11th St.	1500 7th St. W	1501 Russell St.
1010 Russell St. (6)			1500 8th St. W	1500 14th St. W
915 Kern St. (7)			1501 10th St.	1516 & 1516 1/2 12th
935 Kern St. (8)			1500 11th St. W	
941 Kern St. (9)				
1012 Kern St. (10)				
1016 Kern St. (11)				
<i>South 3rd Street</i>				
1939 3rd St.(12)	1701 3rd St.	1701 3rd St.	417 Curtis St.	1701 3rd St.
2135 3rd St.(13)	2601 3rd St.	1819 3rd St.		1910 3rd St.
2204 3rd St.(14)		1602 Grant St.		2224 3rd St.
		2415 3rd St.		2422 3rd St.

Note: A detailed right-of-way acquisition table for each alternative is located in the Technical Memorandum in Appendix B of this document.

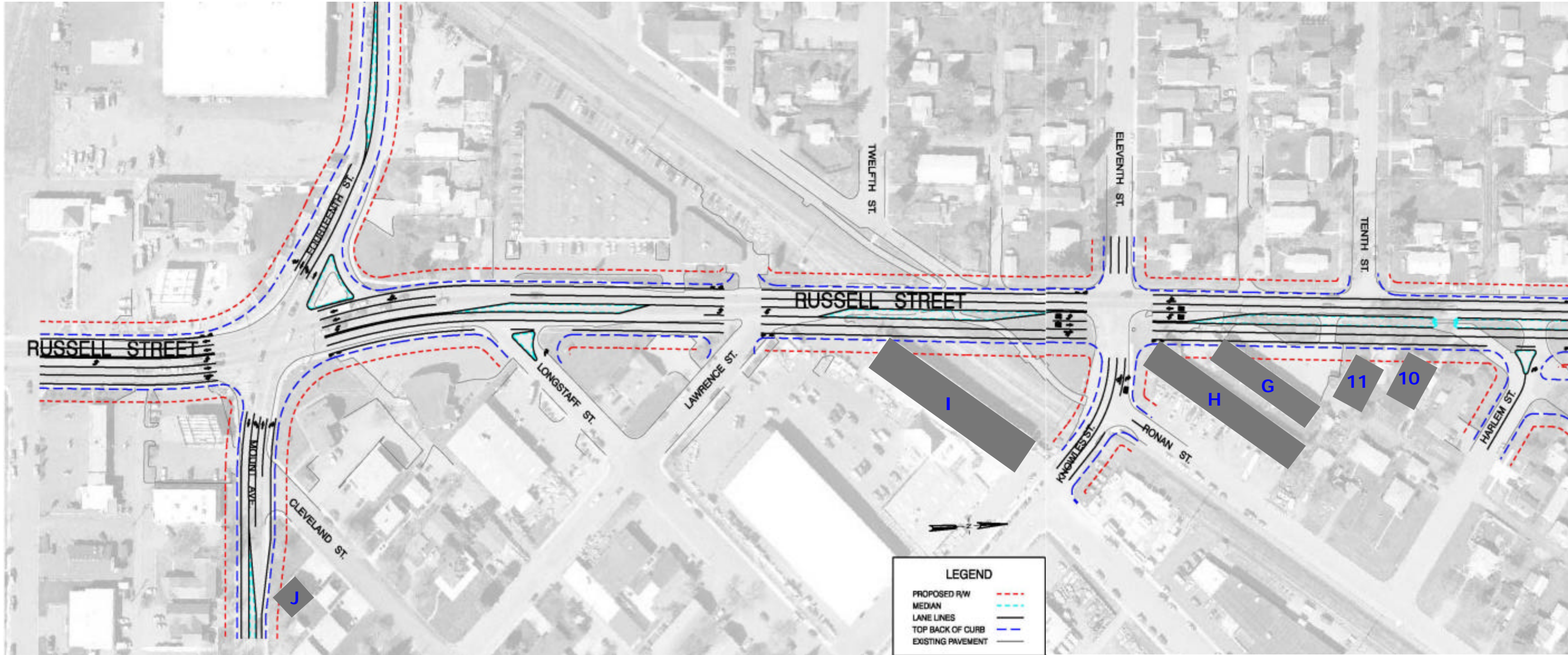
Residential buildings not listed in this table lie in excess of 20 feet from the proposed construction limits.

* Full Acquisition implies that the existing structure is in conflict with the proposed construction limits.

Letters in parentheses following the address correspond with the map identification in Figures 4-2 and 4-3.

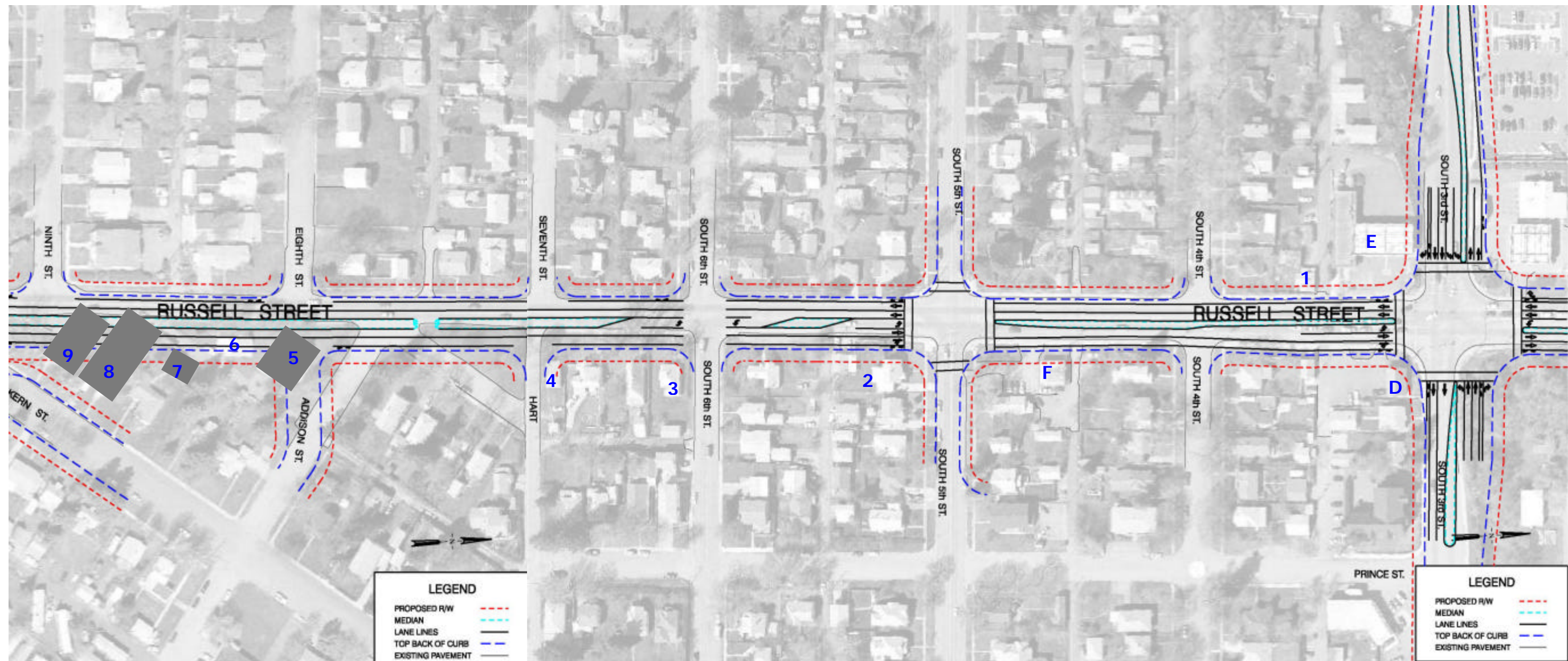


Figure 4-2
Russell Street Preliminary Preferred Alternative
Proposed Right-of-Way Acquisitions
(Sheet A)



Residential Property Acquisition
Commercial Property Acquisition

Figure 4-2
Russell Street Preliminary Preferred Alternative
Proposed Right-of-Way Acquisitions
(Sheet B)

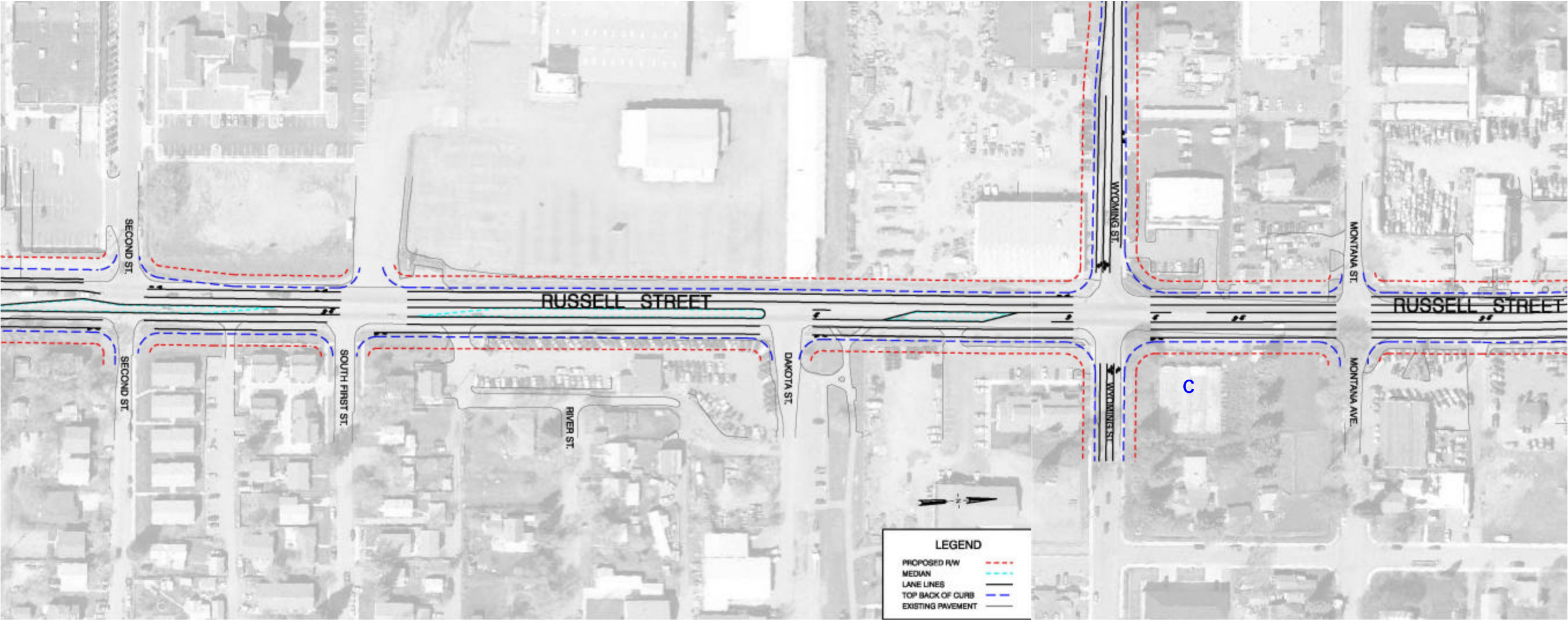


Residential Property Acquisition

Commercial Property Acquisition

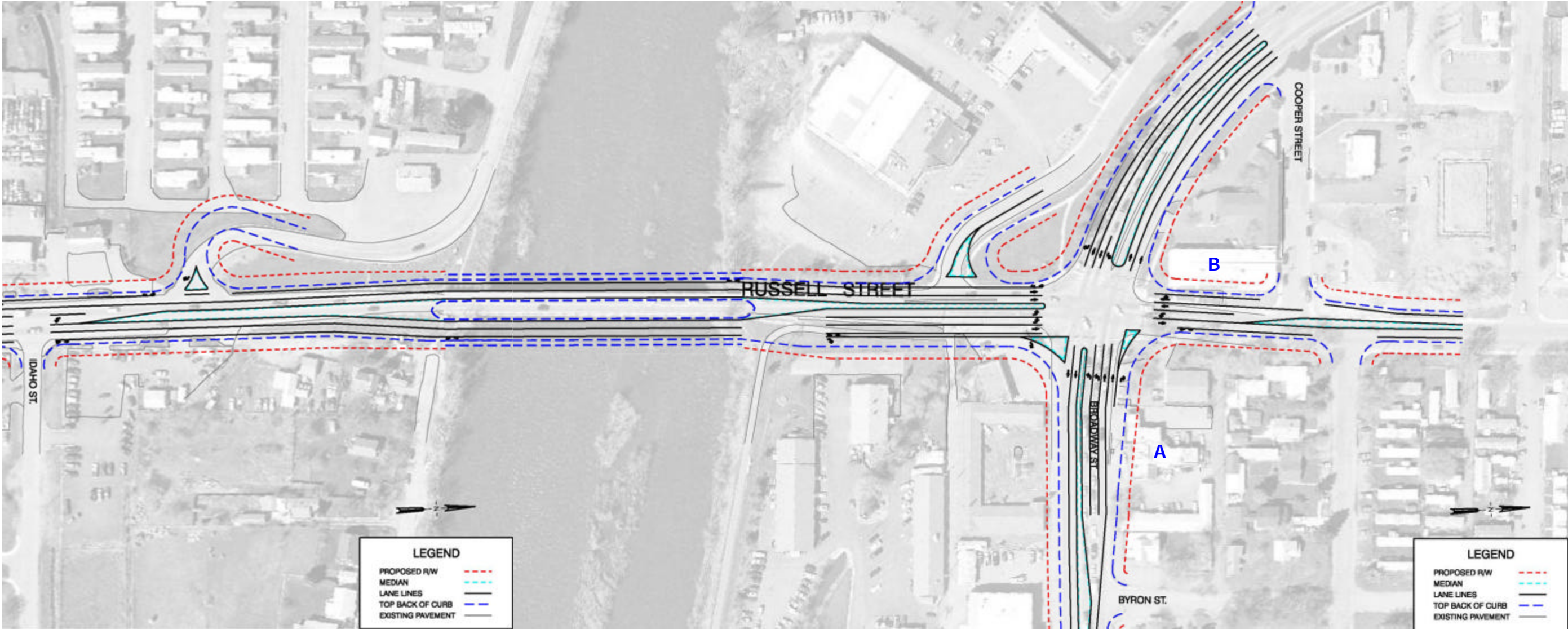


Figure 4-2
Russell Street Preliminary Preferred Alternative
Proposed Right-of-Way Acquisitions
(Sheet C)



Residential Property Acquisition
Commercial Property Acquisition

Figure 4-2
Russell Street Preliminary Preferred Alternative
Proposed Right-of-Way Acquisitions
(Sheet D)



Residential Property Acquisition

Commercial Property Acquisition



Figure 4-3
South 3rd Street Preliminary Preferred Alternative
Proposed Right-of-Way Acquisitions
(Sheet A)

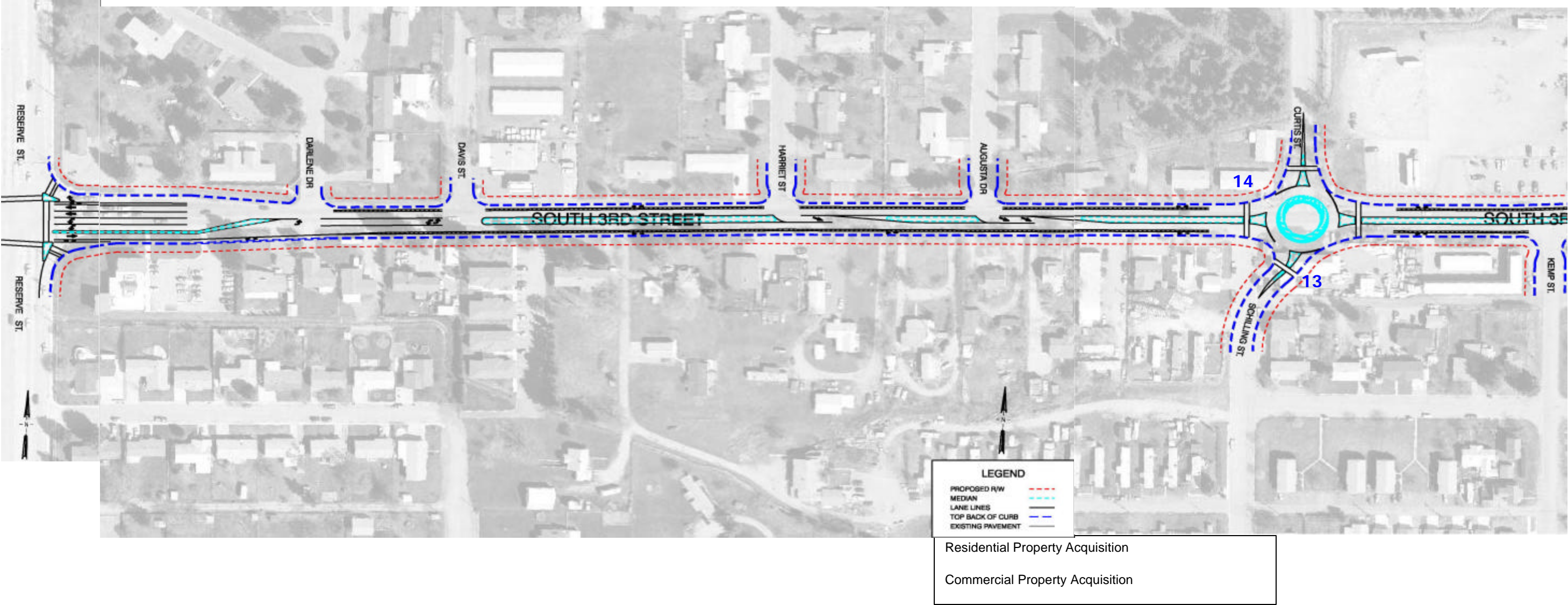
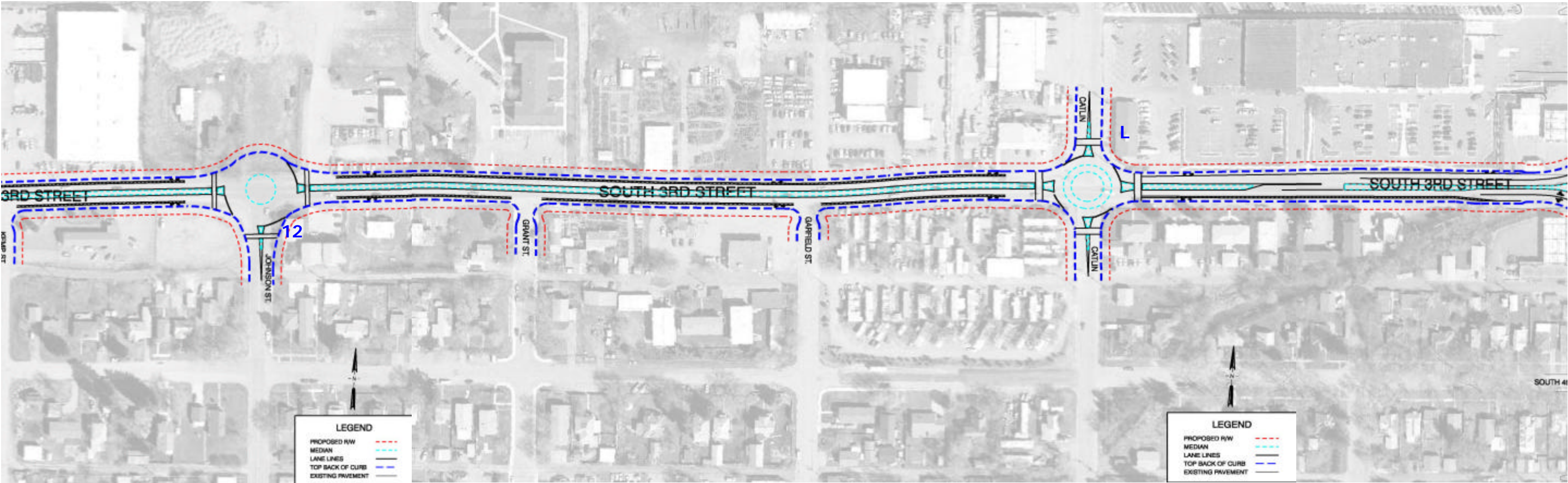


Figure 4-3
South 3rd Street Preliminary Preferred Alternative
Proposed Right-of-Way Acquisitions
(Sheet B)



Residential Property Acquisition
Commercial Property Acquisition

Note: 1318 South 3rd Street is not shown in Figure 4.3. The property lies to the east of Russell Street on the north side of 3rd Street.



Mitigation

Property to be acquired for the proposed project would be purchased for fair market value, and displaced residents and commercial property owners would be provided with relocation advisory services and may be eligible for relocation benefits in compliance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended in 1987 and Sections 70-31-101 and 70-31-311 of the Montana Code Annotated (MCA).

The City of Missoula and/or Montana Department of Transportation will meet with the fire and police departments during design and construction to ensure that impacts created by lines of traffic and medians are minimized. The City and/or Montana Department of Transportation will work with emergency service providers to ensure that adequate access is maintained near the project during construction.

4.4 Economic Impacts

No Build Alternative

Congestion translates into higher opportunity costs (lower productivity due to lost time) in the movement of goods, services, and labor force. Increasing levels of congestion could, over time, affect the ability of the businesses within the study area to attract new business, but it is not anticipated that overall growth in the Missoula area would be affected.

All Build Alternatives

Purchase of property would remove those parcels from the tax rolls; however, because the property to be acquired would represent less than one-half of one percent of the property in the City of Missoula, their removal from the rolls would not have a major effect on tax revenues.

Table 4.3 below provides a summary comparison of the various Build alternative impacts to commercial properties within the corridor.

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Table 4.3

Summary Comparison of Impacts to Commercial Properties on Russell Street

Section	Alternative 4 (Preliminary Preferred)	Alternative 5	Alternative 5 (Refined)
Mount Avenue to South 11 th Street	2 Commercial Buildings	3 Commercial Buildings	2 Commercial Buildings
South 11 th Street to South 3 rd Street	5 Commercial Buildings	5 Commercial Buildings	4 Commercial Buildings
South 3 rd Street to Wyoming Street		2 Commercial Buildings	
Wyoming Street to Russell Street Bridge	1 Commercial Building	1 Commercial Building	2 Commercial Building
Russell Street Bridge to West Broadway Street	2 Commercial Buildings	2 Commercial Buildings	2 Commercial Buildings
Totals	10 Commercial Buildings	13 Commercial Buildings	10 Commercial Buildings

Summary Comparison of Impacts to Commercial Buildings on South 3rd Street

	Alternative B	Alternative C (Preliminary Preferred)	Alternative D	Alternative E
Reserve Street to Russell Street	2 Commercial Buildings	2 Commercial Buildings	1 Commercial Buildings	1 Commercial Building

Those alternatives reducing congestion or making travel easier will tend to improve commercial activity. Travel along the corridor will be reduced in cost, time, and risk of accidents. These are considered positive impacts.

As indicated in Table 4.3, up to 13 commercial buildings may require complete acquisition, while property would be acquired from several more. These impacted properties are also illustrated in Figure 4-1 in the previous section and in Appendix B. Displaced commercial building owners would receive relocation assistance as required by law. Given the number of business enterprises affected compared to the availability of alternative commercial space in the Missoula area, acquisition of commercial space is not anticipated to affect the local economy.



Table 4.4
Right-of-way Impacts on Commercial Properties

Full Acquisition*	Less than 5 feet from structure	5 to 10 feet from structure	10 to 15 feet from structure	15 to 20 feet from structure
Russell Street				
1440 Broadway St.(A)	1407 River Rd.	1427 W. Broadway	403 Russell St.	140 Russell St.
1500 Broadway St. (B)	1503 Russell St.		1440 Russell St.	1417 S. 3 rd St.
1400 Wyoming St. (C)	121 Russell St.		1540 W. Broadway	100 Russell St.
500 Russell St. (D)	1515 Wyoming		1437 1 st St. W	1520 Russell St.
501 Russell St. (E)	1451 W. Broadway		1007 Mount Ave.	1427 2nd St.
1440 S. 5 th St. (F)	Mount and Russell St.			
1120 Russell St. (G)				
1035 Ronan St. (H)				
Montana Rail Link(I)				
1208 Mount Ave. (J)				
South 3 rd Street				
1318 3rd St.(K)	2140 4th St.	1301 3rd St.	1290 3rd St.	1920 3rd St.
1616 3rd St.(L)	2340 3rd St.	1855 3rd St.	1541 3rd St.	2002 3rd St.
	2600 3rd St.	2539 3rd St.	1655 3rd St.	2310 3rd St.
			2115 3rd St.	2316 3rd St.
			2207 3rd St.	

Notes: A detailed right-of-way acquisition table for each alternative is located in the Technical Memorandum in Appendix B of this document.

Commercial buildings not listed in this table lie in excess of 20 feet from the proposed construction limits.

* Full Acquisition implies that the existing structure is in conflict with the proposed construction limits.

Letters in parentheses following the address correspond with the map identification in Figures 4-2 and 4-3.

Mitigation

Any of the Build Alternatives may result in a number of commercial buildings being acquired. The Montana Department of Transportation will purchase properties and provide relocation assistance, as prescribed by the *Uniform Relocation Act of 1970* and Sections 70-31-101 and 70-31-311 of the Montana Code Annotated.

The acquisition of land or improvements for highway construction is governed by state and federal laws and regulations designed to protect both the landowners and taxpaying public. Landowners affected are entitled to receive fair market value for any land or buildings acquired and any damages as defined by law to remaining land due to the effects of highway construction. This action will be in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (Public Law 91-646 as amended), (42 United States Code Section 4651 and 4652, et. seq.) and the *Uniform Relocations Act Amendments of 1987* (Public Law 100-17). Relocation resources are available to all residential and business owners without discrimination.

4.5 Parks and Recreation

No Build Alternative

No changes would be made to parks or recreational facilities within the corridor.

All Build Alternatives

Parks and Recreational Facilities

The Build alternatives would impact passive green space (Kern Park and Hart Park) owned by the City of Missoula. These passive parks are small and serve limited recreational purpose, and thus have no protection under Section 4(f) of the Transportation Act (see correspondence with the City of Missoula Parks Department in Appendix E). These parks would be eliminated, the Thomas Neely commemorative sign relocated, and opportunities for park and recreational enhancements identified elsewhere.

All Build alternatives would provide opportunities for the following recreational design improvements:

- Bike facilities
- Sidewalks
- River trail under the bridge and trail system access to Russell Street at the north and south ends of the Russell Street Bridge
- Grade Separated Trail crossings for Bitterroot Branch Trail and Milwaukee Corridor Trail facilities
- Landscaping
- Pedestrian crossing facilities

The Russell Street Bridge design would include sidewalks and bicycle lanes on both the east and west sides of the structure, and would include access to the river trail system from the roadway from the north and south ends of the bridge.

Recreation opportunities within the project area would be mostly beneficial, though short-term impacts under the Build alternatives would include:

- Access restrictions to parks, trails, and the Clark Fork River during construction
- Traffic congestion in areas of active construction
- Dust, exhaust, and airborne debris in areas of active construction

Trail Connectivity

The grade-separated connections of trails crossing the Russell Street corridor are an integral part of the Build alternatives. This grade separation provides system continuity for safe and efficient travel for bicyclists and pedestrians in and through the corridor. Following is a description of each trail crossing along Russell Street.



Bitterroot Branch Trail Connection

The Bitterroot Branch Trail connection is located at the intersection of the Bitterroot Branch Trail and Russell Street south of the intersection of Russell Street and South 11th Street/Knowles Street. Under any of the Build alternatives, the Bitterroot Branch Trail Crossing would be constructed as a tunnel under Russell Street. The tunnel crossing would be constructed in approximately the same location as the existing trail crossing. The existing trail alignment would be modified to connect to the tunnel structure crossing.

Milwaukee Corridor Trail Connection

The Milwaukee Corridor Trail connection is located where Dakota Street intersects with Russell Street. The trail ends a short distance from the east side of Russell Street and currently trail users cross Russell Street at the Wyoming Street intersection. Under any of the Build alternatives, the Milwaukee Corridor Trail Crossing would be

Figure 4-4
Bitterroot Branch Trail Under-crossing

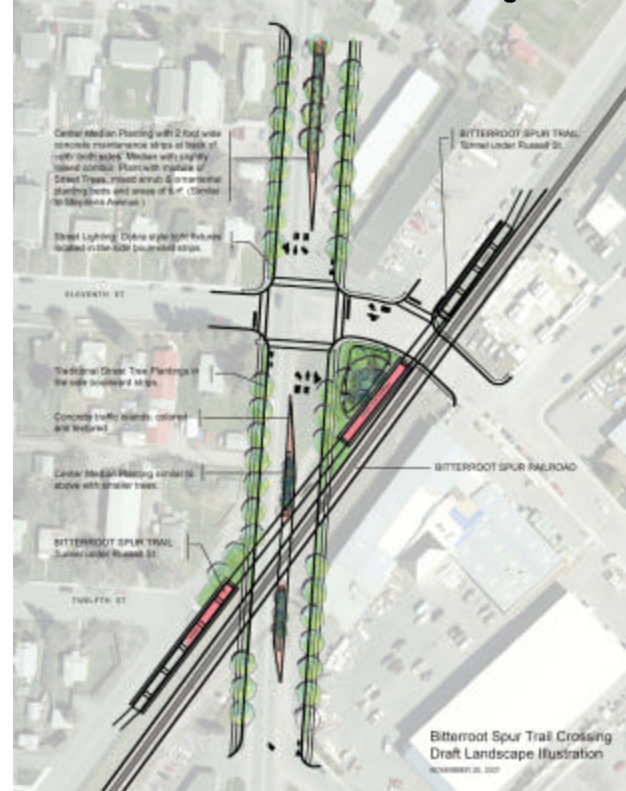
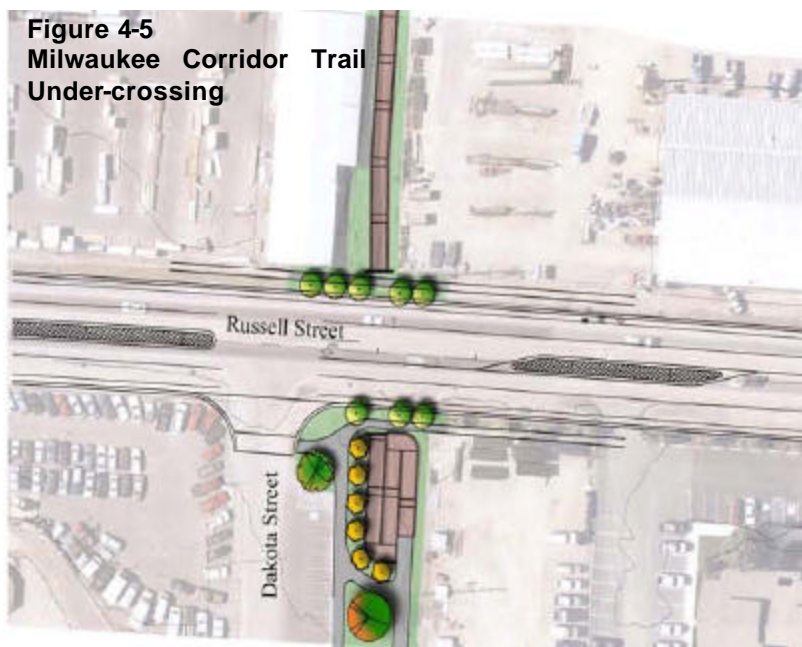


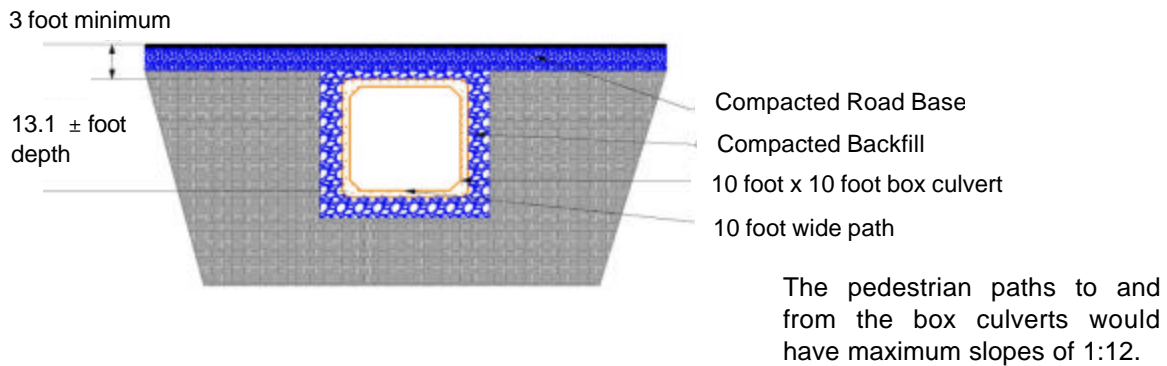
Figure 4-5
Milwaukee Corridor Trail Under-crossing



constructed as a tunnel under Russell Street. The tunnel crossing would be constructed in approximately the same location as where the existing trail terminates on the east side of Russell Street. The existing trail alignment would be modified to connect to the tunnel structure crossing.

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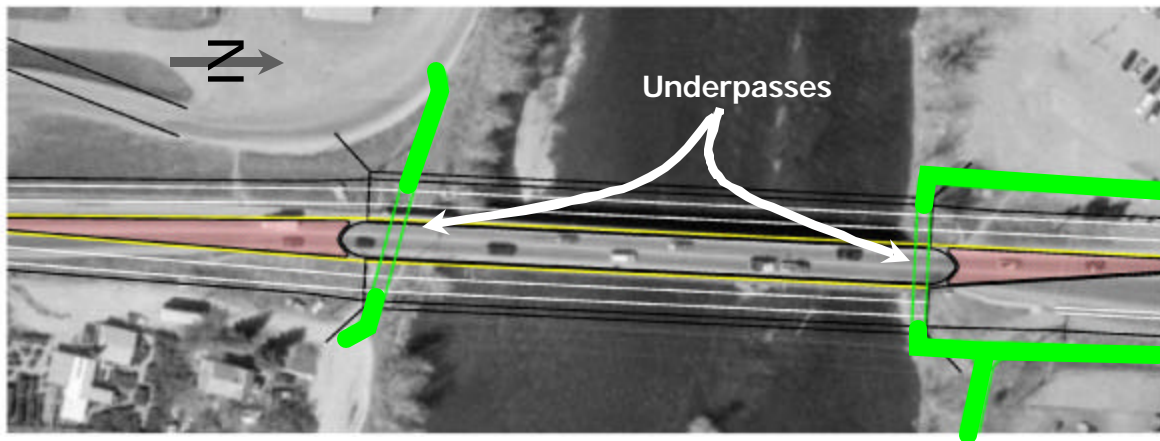
Figure 4-6
Grade Separated Cross-Section



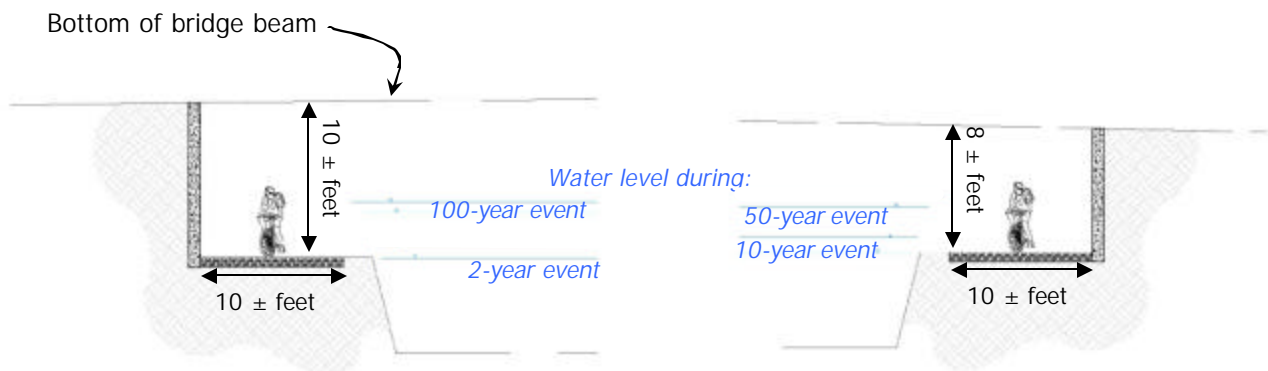
Shady Grove Trail Connection

The Shady Grove Trail connection is located parallel to the east side of Russell Street north of the bridge. The trail turns east and extends approximately 0.5 miles along the riverfront to Burton Street. Reconstruction of the Russell Street Bridge under any of the Build alternatives would include extension of the Shady Grove Trail westward under the bridge and construction of connections to the sidewalks on both sides of Russell Street. A connection on the south side of the river would also be made between the east and west sides of River Road.

Figure 4-7
Shady Grove Trail Connections



The underpasses would provide enough clearance for recreational use beneath the new Russell Street Bridge, but could be inundated during high-water events, as depicted below.





Mitigation

Mitigation of the loss of green space will include additional landscaping and green space along Russell Street between Mount Avenue/South 14th Street and South 3rd Street. The amount of green space that will be added as a result of the proposed project will be the same or greater than the amount that would be adversely affected. The right-of-way negotiation process will allow for the monetary value of Hart and Kern Parks to be directed to the City's Parks Department to be used in conformance with the City's Master Parks and Recreation Plan for the Greater Missoula Area (May 2004).

Trail impacts will be mitigated by the construction of trails directly under the bridge, connecting back up to the Shady Grove Trail on the north river bank, and connecting up to the sidewalk on Russell Street from the south river bank. Trail impacts will also be mitigated by providing grade separated crossing facilities at Bitterroot Branch Trail crossing and the Milwaukee Corridor Trail crossing at Russell Street.

4.6 Pedestrian and Bicycle Impacts

No Build Alternative

Under the No Build Alternative, bicycle and pedestrian facilities would remain unchanged. Signalized crossings provide isolated pockets of service to pedestrians. However, the lack of continuous sidewalks, the lack of separation from vehicular traffic along these two corridors, and the difficulty faced by pedestrians crossing either corridor at locations other than signals creates a substandard quality of service for pedestrians and bicyclists on Russell Street and South 3rd Street.

All Build Alternatives

The American Association of State Highway and Transportation Officials (AASHTO) standards recommend a bike lane width of five feet measured from the face of a curb or guardrail to the bike lane stripe. Under any of the Build alternatives, 5.5 foot bicycle lanes (measured from face of curb) would be provided on both sides of Russell Street and South 3rd Street. The four-foot asphalt bike lanes would be separated from motorized traffic by a solid white painted line, and would be clearly marked as bicycle lanes. The curb and gutter on both roadways would be two feet wide with the gutters located immediately inside of the curb and would provide an additional 1.5 feet of width to the bicycle lane. This provides an effective 5.5 foot bike lane (measured from face of curb) that exceeds American Association of State Highway and Transportation Officials standards.

Sidewalks measuring five feet in width would also be constructed, and would include a grass strip along the outside edge. This strip would vary in width depending upon adjacent development.

As discussed below, any of the Build alternatives would provide the long-term benefit of higher bicycle and pedestrian quality of service and safety as compared to the No Build Alternative.

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Bicycle Quality of Service

Traffic conditions on transportation facilities are commonly defined using the “Level of Service” concept. The *Highway Capacity Manual* defines vehicle Level of Service based on average travel speed, percent time delay, intersection delay, and capacity utilization to provide a qualitative assessment of the driver’s experience. The Federal Highway Administration has developed a similar ranking Level of Service system to assess bicyclists’ experience through the use of a Bicycle Compatibility Index (Index). The Index concept is based on the comfort level riders feel when using roadway facilities and is derived from such factors as the presence and width of bicycle lanes or paved shoulders, curb lane width and volumes, presence and occupancy level of parking lanes, and type of roadside development. Adjustment factors for truck volumes, parking turnover and right-turn volumes were also incorporated.

Six Level of Service/Index categories are used to describe bicycle compatibility. As shown in Table 4.5, Level of Service A (Index = 1.50) represents the best conditions, and Level of Service F (Index = 5.31) represents the worst.

Table 4.5
Bicycle Compatibility Index

Level of Service	Bicycle Compatibility Index Range	Compatibility Level
A	= 1.50	Extremely High
B	1.51 – 2.30	Very High
C	2.31 – 3.40	Moderately High
D	3.41 – 4.40	Moderately Low
E	4.41 – 5.30	Very Low
F	= 5.31	Extremely Low

Note: Qualifiers for compatibility level pertain to the average adult bicyclist.

Source: U.S. Department of Transportation, National Transportation Library

It is important to note that the Index is intended for mid-block bicycle use; it does not account for major intersection evaluations.

Based on existing conditions, the Bicycle Compatibility Index for Russell Street and South 3rd Street is 4.70, and thus currently provides a “Very Low” compatibility level. Without improvements, the corresponding bicycle Level of Service will be at F (calculated at 5.35 or Extremely Low) in the corridor within the next 20 years. With the improvements included in the Build alternatives, the bicycle Level of Service would attain a C designation or better by providing an Index of 2.80 (Moderately High).

Pedestrian Quality of Service

All of the Build alternatives would provide a five foot sidewalk separated from traffic by a bicycle lane and landscaped boulevard.

In addition, the existing Russell Street Bridge would be replaced with a structure(s) that would include sidewalks on the outside, street lighting, traffic separation barriers, pedestrian barriers, and bicycle lanes adjacent to both the east-side and west-side outside travel lanes on the new structure(s).



Mitigation

Construction methods would allow for pedestrian and bicycle travel through the project vicinity, either through temporary facilities or through signs redirecting bicyclists and pedestrians to nearby alternate routes.

The City of Missoula will implement a public information program on the proper negotiation of roundabout intersections by bicyclists and pedestrians. Depending on when construction occurs, this program could be an extension of an ongoing information campaign, or be unnecessary due to the fact that other roundabouts may already be constructed and operating within the city.

Bicycle and pedestrian access will be upgraded throughout the project corridor. Upgraded pedestrian facilities at intersections will comply with Americans with Disabilities Act requirements.

4.7 Air Quality Impacts

Air quality non-attainment and maintenance areas, such as the Missoula Metropolitan planning area, are subject to an air quality conformity determination by the MPO, FHWA, and FTA in accordance with Federal Clean Air Act requirements, EPA conformity regulation and State of Montana air quality rules, as pertain to conformity. Air Quality Conformity is a determination made by the funding agencies that transportation plans, programs, and projects in non-attainment and maintenance areas meet the purpose of the State Implementation Plan. The purpose of conformity is to ensure that transportation plans, programs, and projects do not produce new air quality violations, worsen existing violations, or delay timely attainment of such standards for which an area is designated non-attainment, to ensure compliance with an air quality maintenance plan, and to support the intent of the various transportation funding acts and of the 1990 Clean Air Act Amendments to integrate transportation, land use, and air quality planning. Conformity procedures are also used in the National Environmental Policy Act process to ensure that proposed projects will not violate air quality standards.

No Build Alternative

Motor vehicle exhaust is one of the primary concerns for air quality, thus impacts are anticipated under the No Build alternative since traffic is anticipated to increase regardless of whether improvements are made within these corridors. Localized air quality conditions could worsen as traffic levels rise, and congestion increases at several intersections along Russell Street and South 3rd Street.

All Build Alternatives

The proposed improvements along Russell Street and South 3rd Street have been included in the 1996, 1999, and 2004 Missoula Transportation Plan Updates as regionally significant projects. As part of the regional transportation planning process, both the Russell Street and South 3rd Street improvements were modeled for the regional emissions analysis for air quality conformity. The regional analysis demonstrates that the proposed projects would not increase regional

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emissions and would not increase the frequency or severity of violations. The regional analysis further shows that emissions are below the Environmental Protection Agency-established emissions budget for the region. The current design of these projects does not differ substantially from that proposed and modeled for these Long Range Transportation Plan Updates. The Missoula Transportation Improvement Program for federal fiscal years 2007-2011 includes these two regionally significant projects and was found to conform based on analysis provided in Missoula's 2004 Transportation Plan Update. The latest long range transportation plan (2004 update) was found to conform on June 7, 2004. The 2007-2011 Transportation Improvement Program received approval on June 21, 2007.

Based on the Administrative Rules of Montana for Conformity (Chapter 17.8, Subchapter 13) other agencies that have to be consulted on the course of action include Montana Department of Transportation, City of Missoula, Missoula City-County Air Pollution Control Board, Montana Department of Environmental Quality, Environmental Protection Agency, Federal Highway Administration, and Federal Transit Administration. Consultation among these entities produced a consensus that the approach could be a qualitative conformity determination since:

- a) the project scope and concept has not changed since the time it was last included in the transportation plan (2004 Update) and Transportation Improvement Program conformity determinations (2007-2011 Transportation Improvement Program),
- b) intersections along the corridor are not noted in the State Implementation Plan as being violation areas, potential violation areas, or among the three highest volume intersections, and
- c) the completed project is expected to provide a Level of Service C or better at the various intersections along the route - essentially improving Level of Service.

Based on the discussions above, the proposed improvements on Russell Street and South 3^d Street are demonstrated to meet the conformity criteria for federally funded transportation projects under the Code of Federal Regulations, Title 40, Section 93, and conform to the requirements of the Clean Air Act Amendments of 1990.

Transportation plan updates are required at least every four years in air quality non-attainment and maintenance areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends. (23 CFR Section 450.32(c)) The Missoula Metropolitan Planning Organization is in the process of updating the 2004 transportation plan and conformity determination with anticipated completion in July.

Mitigation

No mitigation is required.

4.8 Noise Impacts

For Russell Street, the Montana Department of Transportation noise impact criteria (66 decibels) is predicted to be met or exceeded at 12 out of 56 receptor locations (representing 13 single-family residences and four apartment units) under current conditions and 22 receptor locations (representing 24 single-family residences, four apartment units and one townhome) in the forecast year for the No Build Alternative. The noise impact criterion is also predicted to be



exceeded at 13 out of 56 receptor locations in the forecast year for the Preliminary Preferred Alternatives. The impacted receptors represent 17 single-family homes and four apartment units. Of the 13 impacted receptor locations, 10 are the same receptors that will also be impacted by the No-Build Alternative in the forecast year and four are being impacted by the No-Build Alternative under current conditions. An additional 12 receptor locations (representing 13 single-family residences) may also be removed due to right-of-way acquisition for the proposed project.

For South 3rd Street, the Montana Department of Transportation noise impact criteria (66 decibels) is predicted to be met or exceeded at seven out of 44 receptor locations (representing seven mobile homes and two apartment units) under current conditions and 22 receptor locations (representing 11 single-family residences, eight mobile homes, six duplex units, and six apartment units) in the forecast year for the No-Build Alternative. The noise impact criterion is also predicted to be exceeded at 21 out of 44 receptor locations in the forecast year for the Preliminary Preferred Alternative. The impacted receptors represent 12 single-family homes, five mobile homes, and six duplex units. All of the 13 impacted receptors will also be impacted by the No-Build Alternative in the forecast year and three are also being impacted by the No-Build Alternative under current conditions. An additional four receptors (representing one single-family residence, two apartment units and three mobile homes) may also be removed due to right-of-way acquisition for the project.

The Federal Highway Administration Traffic Noise Model Version 2.5 computer program was used to predict the traffic noise levels under the future No-Build conditions and the future Preliminary Preferred Alternative conditions on both Russell Street and South 3rd Street. Table 4.6 lists existing and predicted noise levels for the Russell Street alternatives, and Table 4.7 lists the same data for South 3rd Street.

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Table 4.6
Russell Street
Receptors and Predicted Noise Levels for the No Build and Build Alternatives

Receptor	Description	No Build Alternative $L_{eq}(h)$, Present Year 2000 (dBA)	No Build Alternative $L_{eq}(h)$, Design Year 2025 (dBA)	Build Alternatives $L_{eq}(h)$, Design Year 2025 (dBA)
South 3rd Street to South 4th Street				
R9	Single-family residence	64	66	66
R10	Single-family residence	64	66	65
R11	Single-family residence	66	68	Acquire
South 4th Street to South 5th Street				
R12	Single-family residence	64	65	66
R15	Single-family residence	65	67	66
South 5th Street to South 6th Street				
R16	Single-family residence	64	66	Acquire
R17	Single-family residence	63	65	Acquire
R18	Single-family residence	65	67	67
R19	2 Single-family residences	66	68	67
South 6th Street to South 7th Street				
R20	2 Single-family residences	63	65	67
R21	2 Single-family residences	64	65	Acquire
R22	2 Single-family residences	65	67	66
South 7th Street to South 8th Street				
R28	Single-family residence	66	67	66
R29	2 Single-family residences	66	67	66
South 8th Street to South 9th Street				
R30	Single-family residence	65	67	Acquire
R31	Single-family residence	66	67	Acquire
R32	Single-family residence	67	69	Acquire
R33	Single-family residence	64	65	Acquire
R34	Single-family residence	66	67	Acquire
R35	Townhome (1 residence)	65	67	65
R36	Single-family residence	65	67	65
South 9th Street to South 10th Street				
R38	Single-family residence	63	65	Acquire
R39	Single-family residence	65	66	Acquire
R40	Single-family residence	66	68	66
R41	Single-family residence	66	68	66
South 10th Street to South 11th Street				
R42	2 Single-family residences	67	68	67
R43	4 apartments (2 up/2 down)	66	68	66
South 11th Street to Mount Avenue/South 14th Street				
R45	Single-family residence	66	68	Acquire
Total Impacts:		12	22	13

Note: The table results are representative of all 4-lane Build Alternatives, however the number of acquisitions vary.



Table 4.7
South 3rd Street
Receptors and Predicted Noise Levels for the No Build and Build Alternatives

Receptor	Description	No Build Alternative $L_{eq}(h)$, Present Year 2000 (dBA)	No Build Alternative $L_{eq}(h)$, Design Year 2025 (dBA)	Build Alternatives $L_{eq}(h)$, Design Year 2025 (dBA)
Reserve Street to Schilling/Curtis Streets				
T2	Duplex (2 residences)	65	67	66
T3	Single-family residence	63	65	66
T4	Single-family residence	64	66	67
T5	Single-family residence	65	67	67
T6	2 Single-family residences	63	66	66
T8	Single-family residence	65	67	67
T7	4 apartments (2 up/2 down)	63	66	66
T9	Duplex (2 residences)	64	66	66
T10	Single-family residence	63	65	66
T11	Duplex (2 residences)	65	67	67
T14	Single-family residence	63	65	66
T15	Single-family residence	64	66	66
T17	Single-family residence	66	68	68
T18	Mobile home	65	67	67
T19	Single-family residence	66	68	67
T20	Single-family residence	66	68	Acquire
Schilling/Curtis Streets to Johnson Street				
T22	2 apartments (1 up/1 down)	67	68	Acquire
Johnson Street to Catlin Street				
T23	Single-family residence	64	65	66
T26	2 Mobile homes	67	69	Acquire
T27	Mobile home	66	68	67
T28	Mobile home	68	69	Acquire
T29	Mobile home	67	68	67
T30	Single-family residence	65	66	66
T31	Mobile home	66	68	67
T32	Single-family residence	65	66	65
T33	Mobile home	66	68	66
Total Impacts:		10	22	21

Note: The table results are representative of all 4-lane Build Alternatives, however the number of acquisitions vary.

When traffic noise impacts are predicted, practicable abatement measures for the mitigation of highway traffic noise need to be considered, and the measures need to be assessed to determine if they are reasonable and feasible. Necessary abatement measures include modifying the proposed Preliminary Preferred Alternative designs, the construction of noise barriers or berms, and traffic management measures, such as reducing the speed limit, restricting the access of certain vehicle types, and using quieter pavements. Barriers typically provide the highest level of noise reduction of these mitigation measures.

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According to the Montana Department of Transportation Noise Policy, to determine if a mitigation measure is feasible, the measure must provide a minimum 6-decibel reduction in noise levels at residences located closest to the roadway, and must not represent a safety hazard to vehicles traveling on the roadway or to the residents of the homes. To determine if a mitigation measure is reasonable involves more subjective factors, including the comparison of the noise levels associated with the No-Build Alternative to those associated with the Preliminary Preferred Alternative, the cost of the abatement, the timing of development, and the opinion and acceptance of impacted residents regarding the noise abatement measure. Another factor in determining if an abatement measure is reasonable is the comparison of forecast year noise levels. The Montana Department of Transportation has determined that if the predicted noise levels for a Preliminary Preferred Alternative in the forecast year of a project exceed the noise levels in the forecast year for the No-Build Alternative by 3 decibels or more at an impacted receptor, the abatement may be considered reasonable.

Shifting the horizontal or vertical alignments to reduce traffic noise impacts could provide more distance between a roadway and a receptor, resulting in lower noise levels at a receptor. However, additional horizontal alignment shifts for Russell Street or South 3rd Street are not reasonable or feasible for this project, due to the dense urban development and potential impacts/relocations to additional buildings along the roadways. For a vertical alignment shift to be effective the elevation of the roadway would have to be lowered enough to block the direct line of sight of the entire roadway at the noise-sensitive receptor locations. Therefore, shifting the vertical alignment of the Preliminary Preferred Alternatives is not feasible due to the number of cross streets and direct access to adjacent properties.

A barrier is most effective when it is continuous and solid, and it blocks the direct line-of-sight between the roadway and a receptor. Barrier design guidelines are presented in the Federal Highway Administration *Highway Noise Barrier Design Handbook*, February 2000, and can be viewed at (<http://www.fhwa.dot.gov/environment/noise/design/index.htm>). The Handbook includes information concerning various types of barriers and materials, aesthetics, and structural, drainage and safety considerations. As a rule of thumb, barriers only need to be approximately four pounds per square foot to be effective.

Mitigation

The noise study identified one location along South 3rd Street where the construction of a barrier may be a reasonable and feasible noise mitigation measure. A mobile home park is located south of South 3rd Street between Garfield and Catlin Streets, and an eight-foot barrier wall could be constructed on the right-of-way line between Garfield and Catlin Streets. The calculated Cost Effective Index associated with the barrier configuration for the mobile home park, which includes six first row and eight second row benefited mobile homes, is \$1,214 in 2007 dollars, and therefore, meets the Cost Effective Index requirement of less than \$4,200. However, many of the first row mobile home residents currently access their homes and park along the south side of South 3rd Street, and this access would be eliminated by a barrier wall. A final decision of the installation of the abatement measure will be made during the final design and the public involvement process.



4.9 Water Quality Impacts

No Build Alternative

Under the No Build Alternative, there would be no replacement or modification of the existing roadway and therefore no construction activities and no associated impacts on water resources.

Operational impacts on water resources in the area would remain the same as under existing conditions. At present (and under the No Build Alternative), runoff from most of the existing roadway drains to drywells and infiltrates into the underlying aquifer, potentially affecting ground water.

All Build Alternatives

Surface Water

The Montana Department of Environmental Quality is required by Section 303(d) of the Clean Water Act to identify and prioritize those waters for which Total Maximum Daily Loads need to be identified. These loads are an assessment of the amount of pollutant a water body can receive and not violate water quality standards. The Total Maximum Daily Loads determine how much “pollutant load” a lake or stream can assimilate. The Clark Fork River is on the Total Maximum Daily Load list for the presence of Arsenic, Cadmium, Chlorophyll-a, Copper, Nitrogen, Sewage, and Phosphorus from Mill Tailings and Municipal and Industrial Point Sources.

In general, there would be an increase in the total surface area of paved road related to widening and reconstruction under the Build alternatives. The increase in total road surface area decreases the overall permeability of substrate and increases the rate and quantity of surface water runoff from the roadway. The increased surface water runoff has increased potential for erosion, transport of dissolved and particulate contaminants, and for sedimentation.

The quality of runoff from roadways is impacted by vehicle-related contaminants, such as motor oil, grease, and tire rubber. In addition, surface water runoff is impacted by herbicides and pesticides that may be used in landscaped or maintained areas along the streets.

More rigorous standards would be met (with respect to grade, surface water runoff controls, sedimentation, and erosion control), and impacts to surface water quality due to erosion and siltation would be reduced. Through the use of Best Management Practices, the Build alternatives would have no adverse effect on water quality, and in fact would likely improve the quality of stormwater runoff relative to existing conditions.

Stormwater

Stormwater runoff from roadway areas within the project limits that currently drain to the Clark Fork River would be treated using Best Management Practices before being directed to the River. As a result of this modification, no impacts on the Clark Fork River from roadway pollutants in runoff would occur, resulting in an improvement over existing conditions.

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Past projects and activities that have impacted and continue to impact the quality of surface water resources in the project area, particularly water quality in the Clark Fork River, include urbanization in the Missoula Valley; bank stabilization, channelization, and construction of levees; diversions for irrigation and municipal uses; removal of riparian vegetation along the river; mining; agricultural practices; and construction and recent removal of the Milltown Dam approximately six miles east (upstream) of the project area.

The proposed construction of the roadway improvements along Russell Street and South 3^d Street could result in an increase in pollutant loads to surface water, and this increase in pollutant loads would temporarily increase cumulative impacts, principally to the Clark Fork River. However, any project in the vicinity of surface waters is required to obtain permits which require the implementation of practices to control and reduce sediment and pollutant runoff to surface waters.

All roadway and bridge runoff within the project limits would be captured and treated using Best Management Practices. Treated water would be returned to the Clark Fork River or to drywells in accordance with the City's current practice and in coordination with the Environmental Protection Agency. Implementation of these measures and enforcement of the permitting requirements would minimize the potential for this project to contribute to cumulative impacts on surface waters during construction.

Ground Water

The groundwater impacts considered include groundwater availability and supply, as well as quality. No direct impacts to groundwater availability and supply are anticipated to occur with any of the Build alternatives. Direct impacts on groundwater quality from any of the alternatives would be related to stormwater discharge from both the construction and the operation of the proposed improvements.

Under the Build alternatives, precipitation normally falling on the ground surface and eventually percolating downward to the Missoula Valley Aquifer would be intercepted by the impervious surfaces; this precipitation could contain roadway materials such as oil, grease, salts, heavy metals and other materials associated with the operation of vehicles and maintenance of roadways. A majority, if not all, of these materials would be filtered out as the runoff percolates through the alluvial materials before reaching the Missoula Valley Aquifer, which is designated as a Sole Source Aquifer. A Sole Source Aquifer designation is intended to protect drinking water supplies in areas with few or no alternative sources to groundwater resource, and where if contamination occurred, using an alternative source would be extremely expensive. The designation protects an area's groundwater resource by requiring Environmental Protection Agency review of any proposed projects within the designated area that are receiving federal financial assistance. All proposed projects receiving federal funds are subject to review to ensure they do not endanger the water sources.

If the City of Missoula establishes a "dry well" system in the vicinity of the project corridor, runoff from the impervious surfaces could be collected in the "dry wells" and then filtered through the alluvium before reaching the aquifer. Because the groundwater elevation at times may be 10 feet or less below the ground surfaces (depending on the time of year and recharge intensity), surface water entering the dry wells could come into direct contact with Missoula Valley Aquifer groundwater.



Mitigation

Direct impacts and indirect effects to water resources and water quality of the area resulting from any of the alternatives will be avoided or minimized by design and incorporation of water quality facilities using Best Management Practices. Best Management Practices can also reduce construction and operation impacts when properly deployed. Construction during low flow can minimize impacts related to scouring and the transport of sediment downstream.

Should the Best Management Practice selected to manage stormwater runoff for the Preferred Alternative include the use of a “dry well” system, additional Environmental Protection Agency and Missoula Valley Water Quality District requirements may be necessary to ensure protection of the Missoula Valley Aquifer. Requirements may include submittal of construction plans, design capacities, inspection and maintenance requirements, and groundwater monitoring, if necessary. A determination that the project is not a threat to contaminate the aquifer will be requested from the Environmental Protection Agency and will be provided in the Final Environmental Impact Statement for this proposed project.

Regardless of which specific Best Management Practice is chosen to address runoff water quality, the final designs will comply with provisions of the Montana Department of Environmental Quality’s impaired water body designation and total maximum daily loads for the Clark Fork River and the Missoula Valley Water Quality Ordinance for protection of the Missoula Valley Aquifer.

Mitigation measures that will be implemented during construction include:

- All work in and adjacent to water resources will follow state, federal, and local permit requirements.
- Development of a revegetation plan, erosion control plan, and stormwater pollution prevention plan will be coordinated with appropriate permitting and resource agencies.

4.10 Wetlands Impacts

No wetlands were identified within the Russell Street and South 3rd Street project corridors. The proposed project will not result in wetland impacts and therefore mitigation measures are not necessary.

4.11 Water Body and Wildlife Habitat Impacts

No Build Alternative

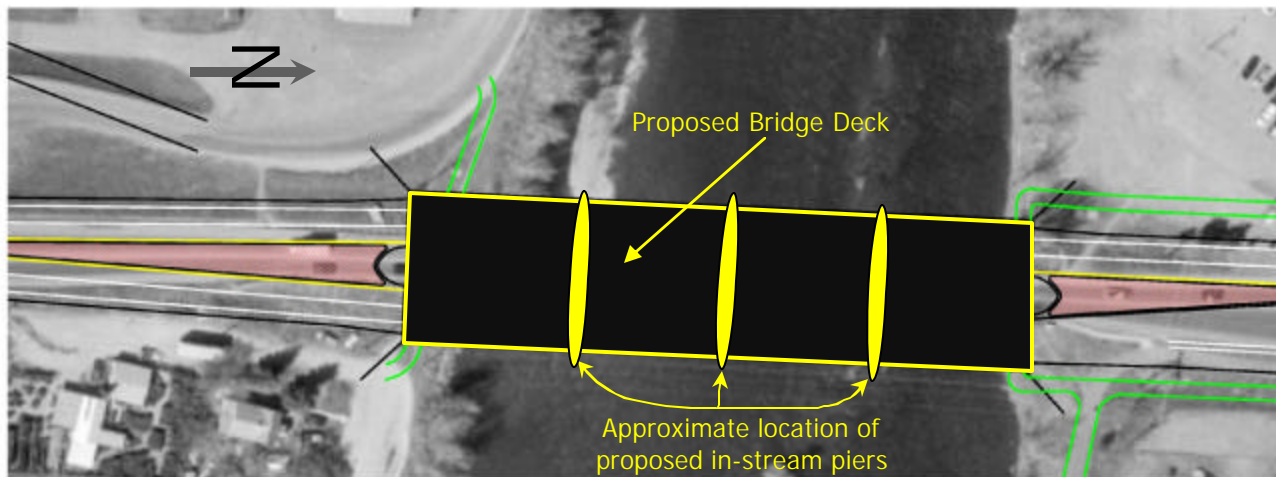
Under the No Build Alternative, no additional water body or wildlife habitat would be disturbed or lost. Increased traffic noise may discourage birds from using trees near the roadways for perching and resting; however, habitat in the project area is currently fragmented from decades of commercial and residential development. No new impacts on fisheries would occur under the No Build Alternative. The habitat and fish species diversity in the Clark Fork River would remain the same.

Urban development along the Clark Fork River would continue to deter species that normally inhabit riparian areas. Under the No Build Alternative, no existing vegetation would be removed and no new landscaping would occur. Vegetation along the road corridor would remain primarily ornamental and the riparian vegetation along the Clark Fork River would remain intact.

All Build Alternatives

The existing Russell Street Bridge would be removed and replaced with four lanes over the Clark Fork River to provide adequate capacity for projected traffic volumes under any of the Build alternatives. The new bridge would be positioned in the same general location and piers along the same alignment as the existing bridge piers. The proposed bridge is a four-span approximately 450 foot long structure. The proposed in-stream bridge supports would be in the same location longitudinally in the river as the existing piers. The new bridge profile and low chord would be higher than the existing bridge resulting in a larger hydraulic opening. Scour predictions for the 50-year and 500-year frequency storm events were determined to be reasonable. The minimal constriction scour depths results from the fact that the proposed bridge spans the floodplain and no constriction in the cross section was created due to the new bridge. The bridge would be supported on in-stream support structures as well as by abutments on the north and south banks of the Clark Fork River. The overall impacted area from the bridge is calculated at less than 0.5 acres using a 10 foot offset from the piers and a two year storm at the bridge abutments. However, some temporary impacts would be anticipated during bridge demolition and construction activities. Bridge replacement activities would include construction of a temporary work bridge; demolition of the existing bridge; excavation and grading of bridge abutments; construction of new bridge foundations; and erection of new bridge decks. The extent of earthwork to be conducted at the bridge abutments, and specific demolition and construction methods to be used are yet to be determined. Figure 4-8 illustrates the preliminary design for the Russell Street Bridge.

Figure 4-8
Preliminary Design of the Proposed Russell Street Bridge



Under any of the Build alternatives, the following long-term impacts on terrestrial biological resources would occur:

- Widening of the Russell Street Bridge would result in the loss of some riparian vegetation used as habitat and movement corridors by small mammals, and several species of amphibians, fish, and birds.
- Soils exposed during construction would be susceptible to long-term colonization by noxious weeds.

All roadway and bridge runoff within the project limits would be captured and treated using Best Management Practices. Treated water would be returned to the Clark Fork River or to drywells, in accordance with the City's current practice and in coordination with the Environmental Protection Agency, resulting in a net reduction in the amount of pollutants entering the Clark Fork River.

Road widening would require extension of the existing culverts underneath the roadway where irrigation ditches are crossed. Because these systems do not support fish within the project area, no loss of habitat is expected.

There would be minimal additional adverse impacts on wildlife habitat compared to the No Build Alternative because habitat is already fragmented.

Mitigation

The following mitigation will be implemented in order to avoid and minimize impacts on wildlife and vegetation from the Build Alternatives:

- While the Bald Eagle has been de-listed, power lines, that are modified or reconstructed as a result of the proposed project will be raptor-proofed in accordance with Montana Department of Transportation standard practices.
- Unique requirements for bridge removal and construction will be addressed in Special Provisions as appropriate.

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- Preservation and restoration of riparian vegetation along the banks of the Clark Fork River within the project area during and/or after construction will be a priority. If vegetation is removed, the disturbed ground will be revegetated with appropriate riparian species.
- Federal, state and local regulations for erosion and sediment control will be followed.
- Areas disturbed during and/or after construction will be revegetated as soon as practicable to mitigate erosion.
- Tree planting will occur in accordance with the City of Missoula's Urban Forestry policy.

Efforts will be made to reduce both the amount of sediment produced and the duration of sediment production. The mitigation proposed includes methods to reduce the amount of sediment that reaches the Clark Fork River during construction. Potential timing restrictions with regard to in-stream construction will be outlined in state and federal permits, which will be secured by the Montana Department of Transportation and the contractors. Impacts on water quality at the irrigation ditches may be avoided by constructing outside the irrigation season when the ditches are dry.

Best Management Practices for erosion control would be applied to reduce the amount of sediment entering the river. Riparian vegetation would be protected by minimizing disturbance of riparian vegetation during construction.

4.12 Floodplains

No Build Alternative

Under the No Build Alternative, there would be no replacement or modification of the existing roadway or bridge, and therefore no associated impacts on floodplains.

All Build Alternatives

There are two locations in the project area where project work may infringe on the 100-year floodplain. The first is the Russell Street Bridge and its abutments, particularly the east side of Russell Street near the south abutment. The second is the south edge of West Broadway Street west of the intersection with Russell Street. These impacts are discussed qualitatively as potential impacts. The Build Alternatives follow the existing longitudinal embankment and would require an embankment expansion for the proposed improvements. This embankment widening would result in a minor longitudinal encroachment into the floodplain. The current width of the 100-year floodplain at the bridge is approximately 400 feet, under any of the Build Alternatives; the floodplain width would increase to approximately 420 feet. No fill within the floodplain is proposed other than that necessary to reconstruct the bridge piers. The quantity of fill in the floodplain would be determined during final design.

In accordance with 23 CFR Part 650 requirements, reconstruction of the Russell Street Bridge is not expected to impact flooding conditions in the Clark Fork River under any of the Build Alternatives, based on the *Bridge Opening Recommendations Memo* prepared by the consultant



HNTB. The existing bridge opening would be maintained to avoid adding embankment fill within the river channel. In addition, existing embankment material will be excavated to provide clearance for a pedestrian/bicycle trail.

The Missoula County floodplain regulations require a minimum of two feet of vertical clearance. Several discussions with the Missoula County Floodplain manager, the Fire Department, and the Montana Department of Transportation Bridge Bureau led to the agreement that the vertical clearance between the lowest point of the proposed bridge (south end of the bridge) and the 100-year flood elevation would match the vertical clearance of the existing bridge as closely as possible under the Build alternatives. The Fire Department also agreed that in the case of an emergency, rescue watercraft would enter the river either above or below the bridge during a flood depending on the location of the emergency. Results of a hydraulic modeling study of the existing and proposed bridge openings indicate that there would be no increase in backwater from the proposed bridge compared to existing conditions.

Floodplain boundaries are based on expected flood water elevation. Because much of the project area exhibits low relief, a small change in elevation in the project area typically represents a substantial change in horizontal distance of the floodplain. The bridge and roadway would be expanded to the east toward the 100-year floodplain boundary on the south side of the river, therefore, it is anticipated that some fill material could be placed in the 100-year floodplain for the construction of the bridge. However, fill placed in the 100-year floodplain for the bridge could be mitigated by the removal of existing fill for the proposed development of the recreational trails underneath the bridge. It should be noted that the existing levee in the vicinity of the bridge will be maintained.

The proposed project would not promote or encourage development within the delineated floodplain, nor increase the flood liability hazards from its construction. This proposed project would therefore be considered to be in compliance with Presidential Executive Order #11988, regarding Floodplain Management.

Mitigation

Construction of the new bridge over the Clark Fork River may infringe on the 100-year floodplain. Any fill into the 100-year floodplain will be in compliance with Executive Order #11988 and State and City floodplain regulations which require that any fill into the floodplain not increase the base flood elevation by more than 0.5 feet. Therefore, mitigation will not be required.

The proposed Russell Street Bridge would increase the hydraulic opening associated with the structure. A wider bridge opening would not improve the hydraulic capacity of the river because there are constrictions downstream of the bridge which affect upstream water surface elevations. The proposed project is not expected to result in any additional changes in stream channel morphology. Additionally, the Shady Grove Trail underpass of the bridge would be designed above the two-year flood elevation. The final design process will include hydraulic and floodplain analysis in order to ensure compliance with Federal Emergency Management Agency regulations.

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A hydraulic analysis, prepared in accordance with the rules and regulations of the Federal Emergency Management Agency and the Montana Department of Transportation, will be required for final design to determine if the resulting water surface elevations are acceptable and to demonstrate that the flood waters within the project area will not provide any additional impacts to the adjacent land owners and structures. The analysis will specify bridge size, scour and erosion protection, and applicable flood proofing measures.

A floodplain development permit will be required from the Missoula Floodplain Administrator.

4.13 Threatened and Endangered Species Impacts

No Build Alternative

Under the No Build Alternative, no habitat for threatened, endangered, or candidate species would be disturbed or lost. Urban development along the Clark Fork River would continue to deter species normally inhabiting riparian areas. Under the No Build Alternative, no existing vegetation would be removed and no new landscaping would be installed. Vegetation along the road corridor would remain primarily ornamental and the riparian vegetation along the Clark Fork River would remain intact.

All Build Alternatives

A determination of effect for the proposed Russell Street and South 3rd Street reconstruction project for bull trout was completed in coordination with the US Fish & Wildlife Service. Based on the coordination documented in this proposed project's Biological Resources Report, the proposed project is **likely to adversely affect** bull trout and designated critical habitat.

Runoff from roadway areas that currently drain to the Clark Fork River and irrigation ditches would be redirected away from the Clark Fork River under all action alternatives, resulting in a net reduction in the amount of pollutants entering the Clark Fork River.

Some impacts would occur even after the implementation of the mitigation measures outlined below. Mitigation would reduce but not eliminate sediment input to the Clark Fork River during construction. However, this sediment would be reduced to a level that would have a minor effect on bull trout. Most increases in sediment would occur during a season when few, if any, bull trout are present in the project area. The likely to adversely affect bull trout determination requires formal consultation with the US Fish & Wildlife Service, which has been initiated with this Draft Environmental Impact Statement.

Mitigation

Formal consultation with the US Fish & Wildlife Service will occur prior to approval of the Final Environmental Impact Statement. The consultation process could result in mitigation in addition to the discussion below. Selection of material source sites will comply with the Endangered Species Act.

The redirection of runoff away from the Clark Fork River under the Build Alternatives is expected to improve following the construction of the proposed project.



Efforts will be made to reduce both the amount of sediment produced and the duration of sediment production. Best Management Practices reduce the amount of sediment that reaches the Clark Fork River during construction. Potential timing restrictions with regard to in-stream construction will be outlined in state and federal permits, which will be secured by the Montana Department of Transportation and the contractors.

Best Management Practices for erosion control would be applied to reduce the amount of sediment entering the river. Prior to and during construction, Montana Department of Transportation will be required to acquire and comply with various state and federal water quality permits in association with this proposed project. These include an erosion control plan to be filed with Montana Department of Environmental Quality as well as Montana Fish, Wildlife, & Parks Stream Protection Act (124) and the Army Corps of Engineers Clean Water Act (404/401) permits and certifications. Section 208 of the Montana Department of Transportation *Standard Specifications for Road and Bridge Construction* specifies the process with which the contractor must comply to prevent and control the siltation of lakes, streams, rivers, ponds, and other wetlands.

4.14 Historic and Cultural Resource Impacts

This section describes potential impacts on historic properties that may be caused by the proposed Russell Street and South 3rd Street reconstruction project.

Two distinct regulatory processes are required for historic resources: Section 106 consultation with the State Historic Preservation Office, and Section 4(f) of the Transportation Act which requires additional consultation by the Federal Highway Administration. Both processes are described below, and an additional discussion of the Section 4(f) process is provided in Chapter 5 of this Draft Environmental Impact Statement.

Section 106

Section 106 of the National Historic Preservation Act and its implementing regulations found in the Code of Federal Regulations (Title 36 Part 800) sets out a process designed to assure that historic properties such as structures, buildings, objects, districts, or archaeological sites that meet the National Register of Historic Places criteria for eligibility are considered during project development and implementation. The State Historic Preservation Officer and the Federal Highway Administration considered eligible or listed properties that may be affected by the proposed project. The two agencies will come to an agreement on how to avoid or reduce the adverse effects of the proposed project on historic resources. Letters documenting their concurrence are included in Appendix C.

Through this process, the State Historic Preservation Officer makes a determination of effect on each property eligible for listing on the National Register of Historic Places. For the purposes of this proposed project, these determinations include:

- **No Effect** – No right-of-way would be acquired, and the site would not be affected by the proposed project.

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- **No Adverse Effect** – Some right-of-way would be acquired, but the proposed project's effects do not meet the criteria of Adverse Effect, or the proposed project has been modified or conditions imposed to avoid adverse effects.
- **Adverse Effect** – The proposed right-of-way would require full acquisition of the property, or the project would alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association.

Section 4(f)

Section 4(f) of Title 23 of the Code of Federal Regulations (23 CFR 774) states that the Federal Highway Administration may not approve the use of land from a significant publicly owned public park, recreation area, wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:

- 1) there is no feasible and prudent alternative to the use of land from the property; and
- 2) the action includes all necessary planning to minimize harm to the property resulting from such use.

The Draft Section 4(f) Evaluation, presented in Chapter 5, will be used by the Federal Highway Administration to establish whether the project would result in the “use” of such property. Regulations governing this process can be found in Title 23 of the Code of Federal Regulations. A “use” occurs when (1) land from a Section 4(f) site is acquired for a transportation project; (2) there is an occupancy of land that is adverse in terms of the statute's preservationist purposes; or (3) the proximity impacts of the transportation project on the Section 4(f) site, without acquisition of land, are so great that the purposes for which the Section 4(f) site exists are substantially impaired (this is also known as a constructive use).

No Build Alternative

There would be no impacts on historic or cultural properties, and therefore **No Effect** under the provisions of Section 106 for the No Build Alternative. As this alternative would not involve any construction, there would be no “use” of a historic site, thus no Section 4(f) impacts.



All Build Alternatives

Of the 33 properties identified as eligible for listing on the National Register of Historic Places, the Montana State Historic Preservation Office has determined that the various Build alternatives would have **No Effect** on 28 of those sites, as outlined in Table 4.8.

The Bitterroot Branch of the Northern Pacific Railroad (24MO718) is a linear site that currently crosses Russell Street in the southerly portion of the corridor. This site would be impacted by any Build alternative. Based on the fact that the site would remain largely intact, and impacts would be limited to a wider at-grade railroad crossing at the same existing location, these impacts have been determined to have **No Adverse Effect** on the historic railroad.

All Build alternatives would require the complete acquisition and removal of two historic residences (24MO811 and 24MO819), resulting in an **Adverse Effect** to these sites. Depending on the alternative, right-of-way would be required from additional historic residential properties along Russell Street. Those properties and the determination of effect are outlined in Table 4.9.

Roundabout intersection configuration would impact five properties, resulting in an **Adverse Effect** on three properties on Russell Street. The Preliminary Preferred Alternative on Russell Street is able to avoid impacts to two additional properties at the intersection of South 5th Street, resulting in **No Effect** determinations. The Preliminary Preferred Alternative would also have **No Adverse Effect** on one property, and an **Adverse Effect** on two properties. Appendix D provides documentation of the coordination with the State Historic Preservation Officer according to Section 106 of the National Historic Preservation Act. Figure 4-7 illustrates the location of these historic sites.

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Table 4.8
Historic Properties Avoided by All Build Alternatives

Site #	Location	Type of Site	Type of Impact	Determination of Effect
24MO796	1436 South 4 th Street	Residence	None	No Effect
24MO798	1501 South 4 th Street	Residence	None	No Effect
24MO805	1502 South 6 th Street	Residence	None	No Effect
24MO812	1501 South 7 th Street	Residence	None	No Effect
24MO814	1500 South 8 th Street	Residence	None	No Effect
24MO820	1135 Russell Street	Residence	None	No Effect
24MO822	1500 ½ South 11 th Street	Residence	None	No Effect
24MO823	1501 South 11 th Street	Residence	None	No Effect
24MO842	1038 South 3 rd Street	Residence	None	No Effect
24MO843	1046 South 3 rd Street	Residence	None	No Effect
24MO845	1102 South 3 rd Street	Residence	None	No Effect
24MO849	1133 South 3 rd Street	Residence	None	No Effect
24MO850	1135 South 3 rd Street	Residence	None	No Effect
24MO852	1202 South 3 rd Street	Residence	None	No Effect
24MO853	1203 South 3 rd Street	Residence	None	No Effect
24MO855	1221 South 3 rd Street	Residence	None	No Effect
24MO856	1225 South 3 rd Street	Residence	None	No Effect
24MO858	1229 South 3 rd Street	Residence	None	No Effect
24MO859	1230 South 3 rd Street	Residence	None	No Effect
24MO860	1250 South 3 rd Street	Residence	None	No Effect
24MO861	1256 South 3 rd Street	Residence	None	No Effect
24MO862	1262 South 3 rd Street	Residence	None	No Effect
24MO881	2537 South 3 rd Street	Residence	None	No Effect
24MO882	2540 South 3 rd Street	Residence	None	No Effect
24MO884	2601 South 3 rd Street	Residence	None	No Effect
24MO885	2608 South 3 rd Street	Residence	None	No Effect
24MO891*	Proposed South 3 rd Street Historic District	District	None	No Effect
24MO892**	Proposed Orchard Homes Historic District	District	None	No Effect

Notes: * Includes: 24MO842, 24MO843, 24MO845, 24MO849, 24MO850, 24MO852, 24MO853, 24MO855, 24MO856, 24MO858, 24MO859, 24MO860, 24MO861, and 24MO862.

** Includes: 24MO881, 24MO882, and 24MO884.

Table 4.9
Historic Resource Impacts

Site #	Location	Alternative 4 (Preliminary Preferred)	Alternative 5	Alternative 5 (Refined)
24MO718	Bitterroot Branch of the Northern Pacific Railroad	No Adverse Effect	No Adverse Effect	No Adverse Effect
24MO800	1508 South 5 th Street	No Effect	No Adverse Effect	No Adverse Effect
24MO801	1501 South 5 th Street and 715 Russell Street	No Effect	Adverse Effect	Adverse Effect
24MO811	824 Russell Street	Adverse Effect	Adverse Effect	Adverse Effect
24MO819	941 Kern Street	Adverse Effect	Adverse Effect	Adverse Effect

For those historic sites that have a No Adverse Effect determination, the Federal Highway Administration has determined, through consultation with the State Historic Preservation Office,



that no further Section 4(f) evaluation would be required. This determination has been made in accordance with new regulations contained in the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) regarding De Minimis findings on impacts to historic resources. Correspondence regarding this determination is included in Appendix C, and is discussed in more detail in Chapter 5 of this Environmental Impact Statement. Figure 4-9 illustrates on the location of impacted historic properties from the Preliminary Preferred Alternatives.

Further information on the properties to be acquired, and having an **Adverse Effect**, is included in the Draft Section 4(f) Evaluation contained in Chapter 5 of this Draft Environmental Impact Statement.

Mitigation

The following mitigations are proposed for impacts on historic properties caused by the Russell Street and South 3rd Street proposed project:

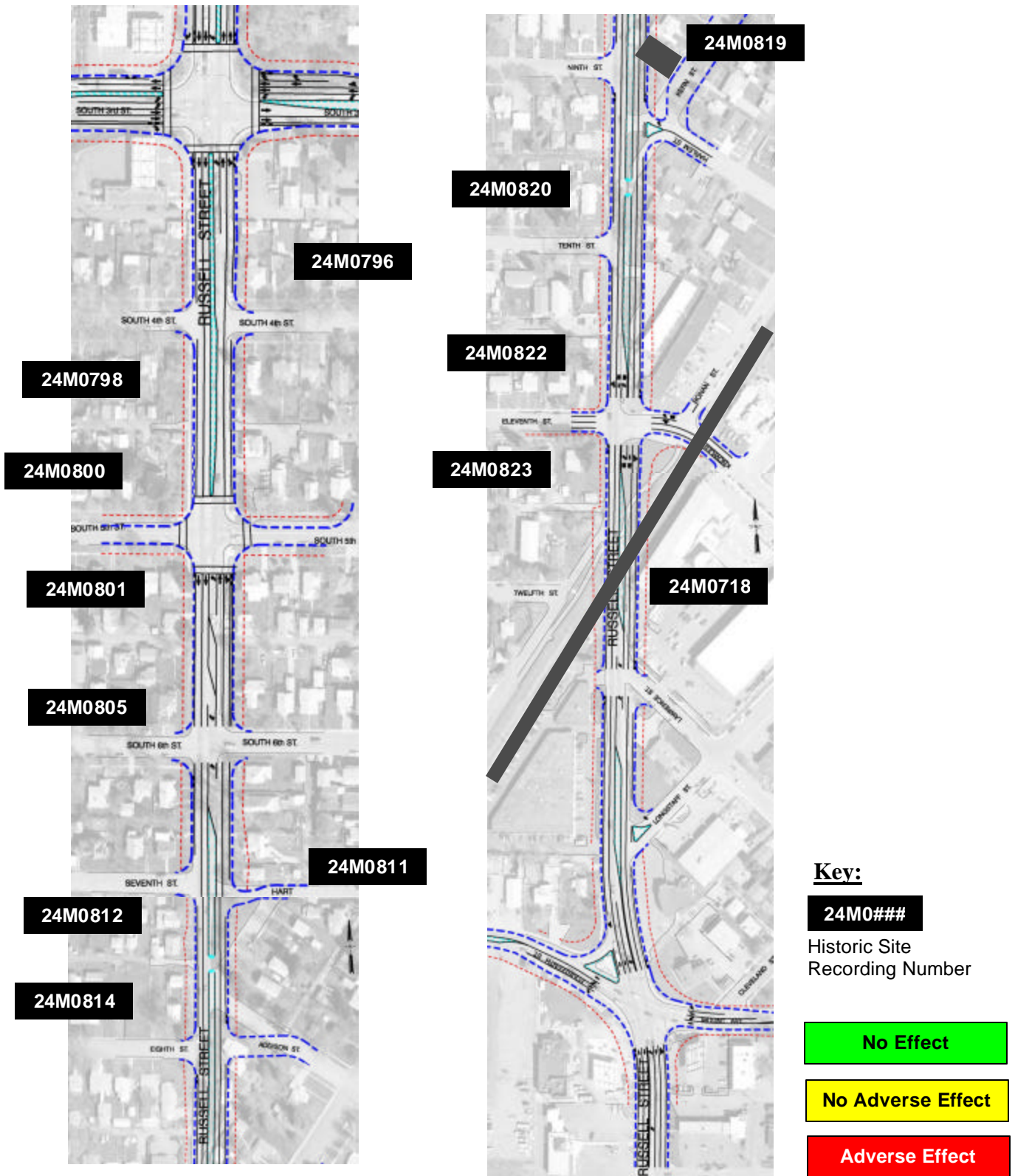
- A Historic American Building Survey documentation of the sites identified as adversely affected in the Final Environmental Impact Statement would be conducted prior to the initiation of construction activities on Russell Street.
- The Montana Department of Transportation would undertake an oral history project of the Russell Street neighborhood affected by the proposed project. The Montana Department of Transportation will conduct the oral history according to the standards developed by the Montana Historical Society. The tapes would be transcribed and housed at the Montana Historical Society with copies provided to the Mansfield Library at the University of Montana.
- Large format photographs would be taken of the Russell Street and South 3rd Street project corridor before, during and after construction to document the impact of the project on the corridor and the historic properties located there. Copies of the photographs would be provided to the Montana State Historic Preservation Office and the Missoula County Historic Preservation Office.

The above mitigation measures have been documented in a Memorandum of Agreement between the Federal Highway Administration and the State Historic Preservation Officer, with the Montana Department of Transportation acting as a concurring party (see Appendix C).

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Figure 4-9

Impacts to Historic Resources from the Preliminary Preferred Alternative





4.15 Hazardous Materials

The following section discusses the hazardous materials sites that may be affected by construction activities and/or pose potential long-term clean-up/control requirements.

No Build Alternative

No long-term or short-term construction impacts are anticipated under the No Build Alternative. Potential and existing hazardous material sites along the project corridor may not be mitigated as a result of the No Build Alternative.

All Build Alternatives

Table 4.10 summarizes all hazardous material sites within the proposed project area which could potentially be affected by any of the Build alternatives. Figure 4-10 illustrates their location relative to the project corridor. An additional six sites are also identified due to the potential to encounter contaminated soils resulting from spills at these locations.

Table 4.10
Summary of Potential Hazardous Materials Impacts

Site ID	Site Name	Address	Type of Site	Location on Alignment	Impact on Alignment	Type of Acquisition	PSI Priority
28	Buffingtons Auto Repair	1027 Ronan	UST, LUST	On Alignment/ Adjacent	Documented petroleum release. Potential impacts to construction activities. Potential long-term impacts.	Full/Partial	High
10.02	Holiday Station Store #278	403 S. Russell	UST, LUST	On Alignment/ Adjacent	Documented release to the soil. Soil has been excavated. Potential impacts to construction activities.	Full	High
13.01	Plum Creek Timber Co. LP	140 N. Russell (700 Gregg Lane)	UST, LUST	On Alignment/ Adjacent	Documented release to soil and groundwater. All UST have been removed. Ground water flow varies, last reported to the NE in May 2000. Potential impacts to construction activities.	Partial	High
13.03	4G Plumbing and Heating, Inc.	1515 Wyoming	UST, LUST	On Alignment/ Adjacent	Documented petroleum release to the soil. Soil has been excavated. Potential impacts to construction activities. Potential long-term impacts.	Partial	High

Source: Herrera Environmental Consultants. *Hazardous Materials Technical Report - Russell and South Third Street Reconstruction Project*. December 2002

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Figure 4-10
Locations of Potential Hazardous Materials Impacts





The likelihood of impacts from encountering existing contaminated sites depends upon the extent and character of contamination and would be minimized by identifying the sites and potential sites prior to construction and employing appropriate control, clean-up, and disposal measures. A variety of impacts, beneficial and/or adverse, could result from encounters with existing hazardous materials sites, including:

- Contamination, that otherwise would remain in place and potentially migrate, may be discovered and addressed by the proposed project.
- Contamination may be cleaned up faster to accommodate project construction.
- Contamination may be prevented by removing potential existing sources, such as underground storage tanks, before they release contaminants.
- Contaminated materials may be uncovered, allowing more direct exposure to the public.
- Contamination may be spread as a result of construction.

Project impacts on the environment at each hazardous materials site cannot be assessed without detailed evaluations of site-specific conditions. However, with proper control techniques, contaminated soil can be removed and disposed of or treated at locations designed for hazardous materials management; contaminated ground water would be treated either onsite or at a licensed offsite facility. By using licensed carriers and vehicles equipped for the task, limited risk of public exposure would occur during removal and transport offsite. If encountered, onsite treatment of ground water would employ techniques engineered for the specific contaminants encountered.

Long-term impacts would occur where properties are acquired that have ongoing clean-up responsibility (after construction) and would include long-term monitoring and documenting site closure. Such sites are typically associated with ground water contamination or multiple contaminant sources.

Mitigation

Many sites along the project have the potential for hazardous materials concerns at deep soil levels, specifically, petroleum hydrocarbon contamination to soil and ground water. During the design and right-of-way phases of project development, these sites would be investigated in detail for soil and ground water impacts that may affect construction.

If hazardous materials remediation is necessary during construction, the contractor would be required to submit a health and safety plan to the Montana Department of Transportation prior to beginning work. There will be special provisions included in the contract documents to address contaminated soil and ground water as needed.

Prior to construction, the Montana Department of Transportation will inspect for asbestos and possibly for lead contamination in all buildings that have been or would be acquired for right-of-way purposes and that are slated for demolition. A lead paint abatement plan would be prepared for lead-based paint on the Russell Street Bridge. Portions of the Russell Street Bridge would be encapsulated during demolition to collect concrete debris and loosened lead paint. Established methods and controls would be implemented to prevent worker and public exposure to lead paint

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and asbestos in accordance with the Occupational Safety and Health Administration (OSHA), Montana Department of Labor and Industry occupational safety and health requirements, and Montana Department of Environmental Quality permit requirements for demolitions.

Throughout the construction process, encounters with hazardous materials would be documented and reported appropriately. Project planning would accommodate regulatory agency requirements as well as disposal or treatment facility requirements.

Properties left with residual contamination would be clearly identified in documentation provided to the Montana Department of Environmental Quality.

4.16 Visual Resources

A discussion of the visual characteristics and aesthetic qualities of the existing corridor was given in Section 3.15. The following are general observations of visual resources and possible impacts from a qualitative point of view. The photographs given in Section 3.15 should be taken as a general representation of the appearance of the alternatives. More specific details will be more fully developed during the design stages of the chosen Build Alternatives for Russell and South 3rd Streets.

No Build Alternative

The aesthetic conditions within the project corridor would remain unchanged under the No Build Alternative. The area would continue to lack focal points, such as medians or landscaped areas along the roadways, and vegetation would continue to be limited to residential lots. Foreground, midground, and background views from the road would remain unchanged under the No Build Alternative.

All Build Alternatives

Existing vegetation within proposed rights-of-way of the project corridor would be removed. The greatest impacts on aesthetic quality would occur when large diameter trees, which provide unity, vividness, and visual buffers to the built environment, are removed in residential areas.

Signalized intersections on Russell Street provides less opportunity for additional landscaping than would otherwise be provided by roundabouts; however a signal controlled intersection also has a smaller footprint at the intersections, thus less overall visual impact at those locations. The overall impacts and potential benefits are very similar between all of the Build alternatives.

The visual quality of the project corridor would improve under any of the Build Alternatives. Although the project would result in a wider roadway and an increase in paved surfaces, landscaping would be incorporated into the road design to soften the foreground and mid-ground views from the road and to help break up the space that is currently dominated by the built environment. Trees will be planted in accordance with the City of Missoula's Urban Forestry tree planting specifications. Raised medians would be landscaped where appropriate. Vividness, intactness, and unity would improve with the implementation of landscaping features under all action alternatives.



Design features proposed for the new bridge would improve the visual quality of the project corridor by creating focal points along the roadway that unify visual elements of the landscape. Foreground and mid-ground viewers of Russell Street from River Road to West Broadway Street would experience improved views of the bridge and the associated built environment. In addition, background views from the bridge would improve due to the slightly higher elevation of the bridge.

Foreground and mid-ground views from the roadway (driver's perspective) would include increased views of the built environment. Background views would improve in the southern portion of Russell Street because several residences on the east side of Russell Street would be removed; therefore, background views to the east would increase. Background views would remain as they are in the northern portion of Russell Street and on South 3rd Street. Placement of landscaping features within raised medians and landscaped boulevards would soften views of and from the road.

Sidewalks and bicycle lanes proposed under the action alternatives would improve the unity of the project area. Proposed landscaping, lighting, and additional green space in the right-of-way would create focal points along the roadway. Together, these design features would enhance the visual connection between the project corridor and the surrounding community. The image and intactness of the neighborhoods located adjacent to the roadway would improve.

Adverse light and glare impacts would be minimized as appropriate through use of directional lighting and careful placement of lights and signage. Lighting would meet Montana Department of Transportation standards and City "Dark Skies Ordinance" through such measures as cut-offs to minimize glare. Table 4.11 describes visual benefits from the Preliminary Preferred Alternative.

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Table 4.11

Visual Benefits of Build Alternatives

Design Feature	Visual Impacts and Benefits
Bicycle facilities	<ul style="list-style-type: none">▪ Increased roadway width▪ Opportunities for improved non-motorized transportation could decrease the visual impacts of traffic congestion
Sidewalks	<ul style="list-style-type: none">▪ Increased right-of-way width▪ Provide visual focal points along the roadway
Bus turnouts	<ul style="list-style-type: none">▪ Increased roadway width▪ Opportunities for community transportation could decrease the visual impacts of traffic congestion
River trail system access to roadway	<ul style="list-style-type: none">▪ Increased right-of-way width▪ Improve non-motorized transportation, therefore reducing visual impacts of traffic congestion and providing visual relief from the built environment
Trail crossings for existing trail facilities	<ul style="list-style-type: none">▪ Increased right-of-way width▪ Improve non-motorized transportation, therefore reducing visual impacts of traffic congestion and providing visual relief from the built environment
Landscaping	<ul style="list-style-type: none">▪ Increased right-of-way width▪ Create focal points along roadway (boulevards, medians, and roundabouts) and provide visual relief from the built environment
Illumination	<ul style="list-style-type: none">▪ Increased visibility and possibly glare along roadway
Americans with Disabilities Act compliance	<ul style="list-style-type: none">▪ Increased right-of-way width▪ Improved access for persons with disabilities▪ Wider sidewalks would allow utility poles and signs to be moved off sidewalks, which would be an improvement under the Americans with Disabilities Act
Crossing facilities	<ul style="list-style-type: none">▪ Increased right-of-way width▪ Provide visual focal points along the roadway▪ An above-grade crossing would decrease the vividness, intactness, and unity of the surrounding area
Roundabouts	<ul style="list-style-type: none">▪ Increased right-of-way width▪ Landscaping opportunities▪ Create focal points within roadway and provide visual relief from built environment

Mitigation

Due to the overall positive impact on visual resources, no mitigation is required.



4.17 Cumulative Impacts

This section provides an accounting of the potential cumulative effects in the study area. The Council on Environmental Quality's regulations for implementing the National Environmental Policy Act defines cumulative effects as:

“Impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions.” (40 CFR 1508.7)

Because Russell Street and South 3rd Street are existing roadway facilities, cumulative impacts include any additive impacts associated with the historic construction, reconstruction, and use of the existing facility, as well as additive impacts created by other projects in the general area.

Geographic Area

The geographic area generally considered for Cumulative Impacts extends from Reserve Street east to Higgins Avenue, and from South Avenue north to the BNSF Mainline.

Resources Affected by this Project

This project is not anticipated to have an effect on the following resources:

- Farmlands
- Air Quality
- Wetlands
- Threatened and Endangered Species
- Hazardous Materials

This project is anticipated to have minor adverse effects on the following resources:

Noise

The Russell Street and South 3rd Street project is projected to cause noise impacts on 34 receptors within the project area. Under the No-Build Alternative 44 receptors would be impacted.

Water Quality

The City of Missoula is undergoing continual redevelopment in commercial areas, new housing construction, and construction and repair of existing infrastructure. The primary effect of these activities along with other, more recent projects in the vicinity of the Russell Street and South 3rd Street corridor is limited to the construction period when exposed soils and demolition activities may cause sedimentation and pollutant runoff to surface waters. All construction activities associated with a water of the U.S. require adherence to permits aimed at protecting surface

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waters such as the Montana pollutant and discharge elimination system permit administered by Montana Department of Environmental Quality, Section 404 permit administered by the US Army Corps of Engineers and the associated Water Quality Certification administered by the Department of Environmental Quality. These permits require implementation of Best Management Practices to reduce pollutants and sediment in runoff draining to surface waters so that a cumulative effect on the resource does not occur.

Water Bodies and Wildlife Habitat

The Clark Fork River and its associated riparian areas support a greater diversity of wildlife than other developed portions of the project area. The project would contribute to the cumulative loss of vegetation in the riparian corridor and the habitat it provides. Because this area is already highly developed with recreational facilities (parks and trails) its use by wildlife is limited. However, those species that are adapted to human presence are observed in these areas (bald eagle, deer, songbirds, raccoons) and their presence within the riparian area is expected to continue even after the project is completed.

Wildlife within the remainder of the project area is limited to those species adapted to urban environments. Because the overall use and habitat conditions in the area would not change, cumulative effects on wildlife are not expected.

Extensive trail development along the river is ongoing. Combining recreational opportunities with existing development along a fragmented river corridor, while preserving trees and providing additional plantings, provides a balance for the shared use of this resource by both humans and wildlife. By committing resources to the preservation of open spaces, the proposed project ultimately provides a greater benefit to wildlife, reducing the overall cumulative impact on biological resources.

Past actions that have influenced fisheries resources in the analysis area include channelization, construction of impassable dams, bank stabilization and encroachment on the floodplain, urbanization, mining, and irrigation diversions. These actions have contributed to the current condition of the Clark Fork River and its ability to support fisheries.

Because runoff from all impervious areas will be treated using Best Management Practices, no cumulative effects on surface waters supporting fish are expected.

Floodplains

Because of the highly urbanized nature of the downtown Missoula area, the floodplain associated with the Clark Fork River has already been subjected to constraints. This project will not increase the base flood elevation. Furthermore, a wider bridge opening would not improve the hydraulic capacity of the river because there are constrictions downstream of the bridge which affect upstream water surface elevations. The proposed project is not expected to result in any additional changes in stream channel morphology



Historic and Cultural Resources

Traffic volumes have increased on Russell Street incrementally since 1957. The Montana Department of Transportation historian stated:

Russell Street stands as the compromised fringe of a potential National Register Eligible Historic District(s). While much of the Russell Street corridor retains sufficient integrity of setting, association, feeling, and design for designation as a historic district, the proposed action and resultant increased traffic volumes and increased incentive for commercial development would constitute a cumulative effect upon the surrounding neighborhoods. Assuming that the Montana Department of Transportation demonstrates that there is no reasonable or prudent alternative to construction of one of the action alternatives, Montana Department of Transportation proposes to address this cumulative effect by funding a neighborhood survey designed to identify whether or not the adjacent neighborhood(s) represent a National Register eligible district or districts, to identify the boundaries of that district, and to identify the character defining features of that district. This survey effort would assist in the future preservation of the neighborhood(s) beyond Russell Street sufficient to avoid additional adverse effects by foreseeable future actions resulting with the proposed reconstruction.

The proposed Russell Street and South 3rd Street Project is anticipated to have positive impacts to the following resources:

Land Use

Social and Economic

Parks and Recreation

Pedestrian and Bicycle Facilities

Visual Resources

Other Past, Present, and Reasonably Foreseeable Actions

Russell Street between South 10th Street and South 3rd Street was historically developed as a local-access road through a primarily residential, working class-neighborhood (Daly and Low's residential subdivisions are located to the west of Russell Street and the South Missoula and Knowles #2 subdivisions are located to the east). The roadway use changed with the construction of the Russell Street Bridge in 1957. After the Russell Street Bridge was constructed, Russell Street served as a primary connecting route between West Broadway Street and Brooks Street. Agricultural property at the southern end of the historic Orchard Homes subdivision was sold in the late 1950s and Russell Street north of South 3rd Street began developing commercially.

South 3rd Street was initially constructed as a primary thoroughfare, connecting the growing Orchard Homes community with the City of Missoula center. South 3rd Street also provided

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access to the loading docks and other industrial facilities associated with the Bitterroot Branch of the Northern Pacific Railroad. Past, current, and foreseeable future minor improvements in the safety and carrying capacity of this roadway are consistent with historic development and should not be considered an adverse cumulative effect.

Current projects which affect resources within the Geographical Area of the Russell Street and South 3rd Street Project include public and private actions such as the Intermountain Lumber Site Redevelopment, Liberty Lanes Redevelopment, and Milltown Dam Removal.

Reasonably foreseeable projects are not expected to vary substantially from the types of current projects within the Geographical Area.

Impacts

The Russell Street and South 3rd Street corridors area not expected to be substantially affected by any past, present, or reasonably foreseeable action in addition to the Russell Street/South 3rd Street reconstruction. The Missoula Transportation Plan provides a unified base for development of transportation systems in the City of Missoula. Other than some infill developments the only substantial change within the corridor are the redevelopment of the Intermountain Lumber and Liberty Lanes Sites. The plan put forward by the Missoula Housing Authority for the Intermountain Site envisions both a commercial and residential complex which would include 36 affordable housing units along with 1.5 acres of green space. The Liberty Lane site is planned for mixed use and affordable housing.

The Milltown Dam removal is a part of the Milltown Reservoir Sediments Superfund Site. The cleanup process involves the removal of 2.2 million cubic yards of contaminated sediments trapped behind the dam as well as the removal of the Milltown Dam and powerhouse. This process is expected to take in upwards 15 years to fully complete and return the river to its natural state. The dam was breached in March 2008. The Environmental Protection Agency expects little or no effect on downstream aquatic life resulting from the metals released during the excavation and remediation. The increased amount of suspended solids will likely have a temporary negative effect on downstream aquatic life.

Accumulation of Impacts

The Russell Street/South 3rd Street project is not predicted to provide for any adverse cumulative impacts within the geographical project area. Other than providing increased access to residences and commercial buildings, no land use changes are expected other than the redevelopment at the Intermountain Lumber and Liberty Lanes Sites. An increase in the pedestrian and bicycle level of service through traffic control measures, addition of bike lanes, and grade separated trail crossings will provide a positive impact to the corridor while allowing for more intermodal transportation opportunities. The replacement of the existing Russell Street Bridge along with other projects within the Clark Fork River Watershed will not compound into an overall permanent adverse affect on the river or the aquatic life within it.



4.18 Construction Impacts

Land Use

Short-term construction impacts may include disruptions of access to residential, commercial, and recreational properties adjacent to the project corridor.

Social and Economic Conditions

Short-term construction impacts such as minor traffic delays and temporary lane closures would occur with the Preliminary Preferred Alternative. Modified school bus and Mountain Line routes would also likely be adopted during construction.

Construction within the project corridor would result in temporary restricted vehicle access on some streets, which could affect fire and emergency response traffic, and law enforcement traffic. Restricted access would be limited to as little time as necessary. Construction would also result in temporary restricted access to fire hydrants. Fire and emergency response, law enforcement, and solid waste collection services would be contacted during the final design phase and during the construction phase so that alternate routes and schedules could be planned.

Utilities would be relocated as needed and there would be no long-term impacts. Relocation or realignment of utilities in the project corridor would be completed according to City of Missoula standard practices. Construction may require relocation of several overhead electric distribution lines, telecommunication lines, light posts, underground utility boxes, and a low pressure gas line depending on the roadway design. Coordination with the utility owners would occur during the design phase of the project.

The City of Missoula, Montana Department of Transportation, and Federal Highway Administration will coordinate with Montana Rail Link regarding possible disruptions to the rail line crossing of Russell Street during the final design and construction stages of the project.

Pedestrian and Bicycle Conditions

Short-term construction impacts including traffic delays and temporary lane and sidewalk closures would occur. These are expected to vary depending on the extent and nature of the construction disturbance, and on the time necessary to complete construction.

Disturbances related to project construction may require bicyclists and pedestrians to travel closer to vehicle traffic as well as to construction machinery. Sidewalk and shoulder closures may require pedestrians and bicyclists to be directed to alternate routes.

Air Quality

To minimize dust from construction activities that would contribute to ambient concentrations of suspended particulate matter, the construction contractor(s) will comply with the Montana

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Department of Transportation Best Management Practices, and in accordance with Montana Pollutant Discharge Elimination System, Construction General Permit.

The construction contractor(s) would be required to comply with current Missoula Air Quality Regulations.

Noise

Construction activities associated with the Build Alternatives are likely to produce sound levels exceeding allowable limits as established by the Missoula Municipal Code 9.30.040 (Table 3-3). There would be temporary increases in sound levels at locations near active construction areas and along routes to these areas. There are many homes within 50 to 100 feet of areas where active construction would occur and these would likely be affected by noise from construction activities involving heavy equipment and hauling of construction materials. The increase in noise would depend on the type of equipment being used and the amount of time it is in use.

Contractors will comply with current rules and regulations set forth in the Missoula Municipal Noise Ordinance. Construction zones will be subject to the maximum permissible noise levels specified for industrial zones for the period within which construction is to be completed pursuant to an applicable construction permit issued by the City of Missoula.

Water Quality

The most substantial potential impacts to surface water quality are related to replacement of the Russell Street Bridge. Soil erosion, debris and dust from bridge demolition, and heavy equipment use all could result in impacts on water quality in the Clark Fork River.

Operation of heavy equipment at the site would require fueling and engine maintenance activities that involve oil, grease, solvents, and other engine fluids. Good housekeeping practices will be utilized to minimize the potential for these materials to impact stormwater runoff.

Water resource impacts typically associated with demolition activities include increased debris loading to stormwater conveyance systems and increased particulate loading in runoff. Best Management Practices will be utilized to minimize the potential for water resources impacts. Given the distance from the river and the high volume of flow in the river, any associated impacts are expected to be very minor.

Water Bodies and Wildlife Habitat

Short-term construction impacts on fish may occur during several stages of construction, including in-stream construction, dewatering of the construction zone, construction of a work bridge, removal of the bridge, and during trail construction. Erosion caused by reconstruction of the project could cause short-term increases in turbidity resulting in minor effects to aquatic species of the Clark Fork River.

Construction activities would result in temporary increased erosion potential, reduced slope stability, and could temporarily increase turbidity in the river downstream of the project; particularly during precipitation events. Increased exposure of soils in the project area would



provide a continuing source of sediment into the local system during precipitation events until stabilized.

In-stream construction activities may also increase sediment levels in the river.. In-stream construction includes construction of new bridge piers, removal of piers from the old bridge after the new bridge is completed, and construction and removal of work bridges if necessary.

The existing Russell Street Bridge would require removal under the Preliminary Preferred Alternative. The concrete deck and the existing piers would be removed according to the conditions of the required stream permits. Construction activities near the bridge resulting in increased activity and noise in the area could temporarily disrupt or displace wildlife living in or traveling through the riparian habitat near the bridge.

Unique requirements for bridge removal and construction will be addressed in Special Provisions as appropriate. These requirements will be coordinated with the appropriate resource agencies during final design.

In-stream activities associated with the project may result in temporary adverse impacts to important bull trout habitat downstream of the project. Exposure of cut-slopes and other areas adjacent to the river, and other disturbances described above will increase the potential for sediments to reach the Clark Fork until stabilized, possibly impairing habitat suitability. These effects would, however, be substantially reduced through application and monitoring of Best Management Practices for pollutant/sediment/erosion control during and following construction as required in the Montana Department of Transportation Highway Construction Standard Erosion Control Work plan, Montana Department of Transportation standard specifications, and Montana Fish, Wildlife, & Parks Stream Protection Act and federal Section 404 Clean Water Act permits required for the project.

Floodplains

Potential construction-related impacts on floodplains are primarily related to construction of a work bridge, if necessary, as a part of Russell Street Bridge replacement activities. Pending final design, the project impacts within the 100-year floodplain could increase the potential for flooding, however, floodplain permits would be secured if necessary prior to construction.

If a work bridge is necessary, it will be removed in its entirety from the Clark Fork River floodplain/floodway when construction activities have completed.

Threatened and Endangered Species

Increases in turbidity, suspended sediment, and other pollutants can reduce stream productivity, reduce feeding opportunities for fish, and result in fish avoidance of important habitat. Deposited sediments reduce habitat volume by filling pools and intergravel spaces which are critical to young fish.

Best Management Practices will be utilized to minimize the potential for sediment discharge to the Clark Fork River during construction. The potential implementation of in-stream timing

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restrictions will further reduce potential impacts to the Clark Fork River. The “likely to adversely affect” determination for Bull Trout requires formal consultation with the U.S. Fish and Wildlife Service, which has been initiated with this Draft Environmental Impact Statement.

Historic and Cultural Resources

There would be no construction impacts to historic and cultural resources.

Hazardous Materials

Impacts associated with existing contamination present on any of the alternative sites would be largely short-term (during construction).

Visual Resources

Short-term construction related impacts would include:

- Traffic congestion in areas of active construction
- Construction vehicles and equipment
- Clearing and grading activities resulting in exposed soils until surfacing or replanting occurs
- Erosion control devices such as silt fences, plastic ground cover, and straw bales
- Dust, exhaust, and airborne debris in areas of active construction
- Staging areas used for equipment storage and construction materials
- Lighting and signage resulting in increased glare.

4.19 Energy Implications

The dominant energy source for the transportation sector is petroleum, and nearly two thirds of the petroleum consumed in the United States is in this sector. The highway mode accounts for nearly three-fourths of total transportation energy use with about 80 percent from automobiles, light trucks, and motorcycles, and about 20 percent from heavy trucks and buses.

Fuel consumption is a function of traffic characteristics similar to those affecting emissions. Primary characteristics include traffic flow, driver behavior, highway geometrics, vehicle fleet, and climate. Modeling by the Oak Ridge National Laboratory suggests that of all the travel-related factors affecting fuel economy, average vehicle speed explains most of the variability in fuel consumption and is a good predictor of fuel economy for most urban trips. Fuel efficiency under steady flow, cruise-type driving conditions peaks at speeds of 35 to 45 miles per hour and then rapidly declines at higher speeds. At lower speeds, however, engine friction, tires, and accessories (power steering and air conditioning, for example), as well as repeated braking and acceleration, also reduce fuel efficiency.



No-Build Alternative

While the fuel efficiency of the vehicle fleet is expected to improve over the next 20 years, increased congestion resulting in stop-and-go traffic under the No-Build Alternative would increase the overall energy requirements in these corridors.

Preliminary Preferred Alternatives

By adding capacity, and thus increasing average vehicle speeds and smoothing traffic flows as compared to the No-Build Alternative, the Preliminary Preferred Alternatives would have the greatest positive effect on those fuel economy factors related to travel conditions and driver behavior. While the overall effect on energy requirements is not anticipated to entail an appreciable benefit, similar to air quality, it does not cause or contribute to additional problems.

Mitigation

No mitigation is required.

4.20 Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

Short-term impacts are anticipated during the construction of the proposed improvements to Russell Street and South 3rd Street. These impacts include traffic disruptions during reconstruction of the travel lanes, bridge replacement, and disruption to the trail systems. These disruptions may result in short-term impacts to residential and business access, and local traffic flow.

As described in Section 4.17 (Construction Impacts) of this chapter, short-term impacts related to noise, air quality, and water quality can also be expected. Mitigation measures would be employed to offset these impacts.

The proposed improvements in these corridors are consistent with local and regional planning for land use and the transportation corridors; thus the contribution to the maintenance and enhancement of long-term productivity of the uses within the study area, as well as the surrounding area, outweighs the more localized, short-term impacts anticipated by the proposed project.

4.21 Irreversible and Irretrievable Commitment of Resources

Construction of the proposed improvements to Russell Street and South 3rd Street would involve the commitment of a wide range of resources including:

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- Natural resources in the form of land converted for roadway use;
- Physical resources in the form of construction materials for the improved facilities;
- Human resources in the form of labor employed during construction; and
- Fiscal resources in the form of public funding for construction.

Land used for the Preliminary Preferred Alternatives is considered an irreversible commitment during the time period that the land is used for a roadway facility. However, if a greater need arises for use of the land or if the roadway facilities are no longer needed, the land can be converted to another use. At present, there is no reason to believe that such a conversion would ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and roadway construction materials such as gravel, steel, concrete, and bituminous pavement would be required to implement the Preliminary Preferred Alternatives. These materials are generally considered irretrievable; however, they are not in short supply and their use would not have an adverse or cumulative impact on the continued availability of these resources. Some materials, such as gravel, pavement products, and steel may be recycled for future use.

Human resources would be used for the design, construction, and maintenance of the project.

Any construction would also require a substantial one-time expenditure of local, state, and federal funds, which are not retrievable. Funds have already been committed and spent for planning, preliminary design, environmental studies, and developing this Draft Environmental Impact Statement.

The commitment of these resources is based on the belief that the users of the transportation system (local, region, state, national, and international) would benefit by the improved quality of the transportation system. The primary benefits are increased accessibility, safety, time savings, and greater availability of quality services which are anticipated to outweigh the commitment of these resources.

4.22 Permits and Coordination Required

Prior to construction of the Russell Street and South 3rd Street reconstruction project the following permits and coordination would be required:

- Section 401 Certification of the Clean Water Act – Water Quality Certification from the Montana Department of Environmental Quality
- Section 404 Permit of the Clean Water Act from the U.S. Army Corps of Engineers.
- Montana Pollutant Discharge Elimination Permit from the Montana Department of Environmental Quality
- Montana Land-Use License or Easement on Navigable Water from the Montana Department of Natural Resources
- Floodplain encroachments must be approved by the Missoula County Floodplain Administrator.

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- Montana Stream Preservation Act (SPA 124 coordination) with Montana Fish, Wildlife & Parks.
- City of Missoula MS4 Permit
- Any necessary drywell permitting would be coordinated with the Environmental Protection Agency.

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5.0 DRAFT SECTION 4(F) EVALUATION

This chapter provides a description of properties located within the Russell Street and South 3rd Street corridors that are protected by Section 4(f) of the Transportation Act of 1966 (49 USC 303). Section 4(f) declares that “[i]t is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that “[t]he Secretary [of Transportation] shall not approve any program or project (other than any project for a park road or parkway under Section 204 of this title) which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, State, or local significance as so determined by such officials unless:

- 1) there is no feasible and prudent alternative to the use of such land; and
- 2) such program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

This Section 4(f) Evaluation documents the considerations, consultations, and alternative studies supporting the conclusion that there are no feasible and prudent alternatives to the use of the Section 4(f) resources located in the Russell Street and South 3rd Street corridors and that the Preliminary Preferred Alternative includes all possible planning to minimize harm to the affected resource(s).

The United States Supreme Court clarified the definitions of the words “feasible” and “prudent” as they are used in Section 4(f) to mean:

“Feasible” - Capable of being done “only if it comports to sound engineering practice and judgment.”

“Prudent” - For an alternative to be considered *not prudent*, “it must be shown that unique problems or unusual factors, or, that cost, environmental impacts, or community disruptions of such extraordinary magnitude, are associated with such alternative.”

In 2005, Congress amended Section 4(f) as part of the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users*. This amendment authorizes the Federal Highway Administration to approve a project that results in a *de minimis* impact to a Section 4(f) resource without the evaluation of avoidance alternatives typically required in a Section 4(f) Evaluation.

The amendment regarding *de minimis* impacts states in part:

The requirements of this section shall be considered to be satisfied and an alternatives analysis not required if the Secretary [of Transportation] determines that a transportation program or project will have a *de minimis* impact on the historic site, parks, recreation areas, and wildlife or waterfowl refuges. In making any determination, the Secretary shall consider to be part of a transportation program or project any avoidance, minimization, mitigation, or enhancement measures that are required to be implemented as a condition of approval of the transportation program or project. With respect to historic sites, the Secretary may make a finding of *de minimis* impact only if the Secretary has determined in accordance with the consultation process required under Section 106 of the National Historic Preservation Act that the transportation program or project will have no adverse effect on the historic site or there will be no historic properties affected by the transportation program or project; the finding has received written concurrence from the State Historic Preservation Officer; and the finding was developed in consultation with the parties consulted under the Section 106 process.

5.1 Proposed Action

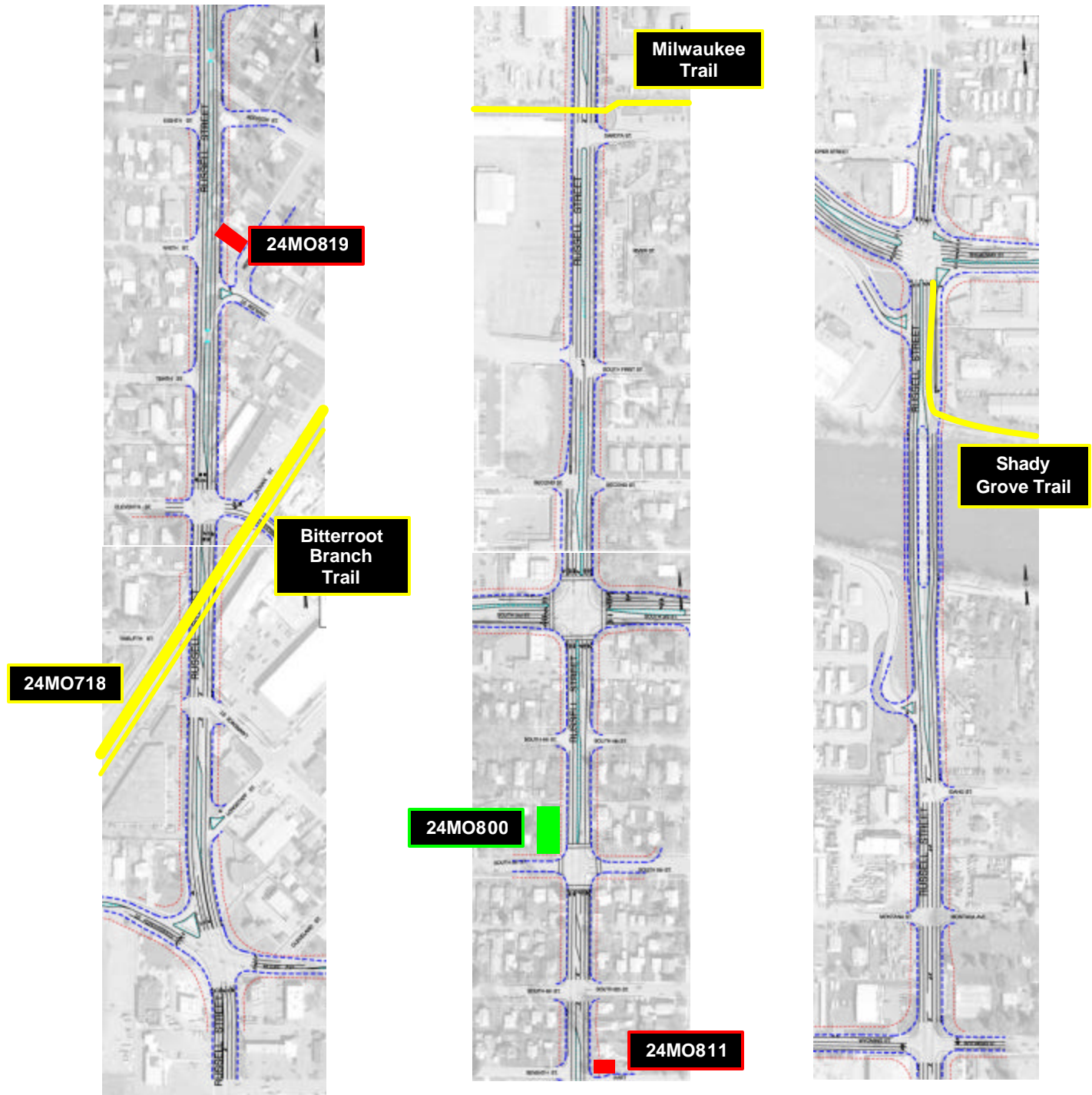
The City of Missoula, in cooperation with the Montana Department of Transportation and the Federal Highway Administration, initiated a study to evaluate alternatives to address the current and projected safety mobility concerns on Russell Street and South 3^d Street. The 1996 Missoula Transportation Plan Update recommended widening Russell Street to 4+ lanes and South 3^d Street to 2+ lanes to correct roadway deficiencies. The proposed project includes vehicular capacity improvements, accommodation of alternative transportation modes, grade separated trail crossings, transit pullouts, sidewalks, curb & gutter, boulevards, and bicycle lanes. Signalization of key intersections, as well as the potential for construction of roundabout traffic control is also under consideration with this proposed project.

5.2 Section 4(f) Properties

As outlined in Chapters 3 and 4 of this Environmental Impact Statement, there are 37 properties within proximity of the proposed project that are protected by Section 4(f) including historic buildings, a historic rail line, and three recreational trails (See Section 3.3 for trail and Section 3.13 for historic property information). Table 5.1 identifies the seven properties affected by the proposed project, the type of impact proposed on each resource, and the Section 106 determination of effect on those resources. Figure 5-1 illustrates the location of each protected property impacted by the proposed project.



**Figure 5-1
Section 4(f) Property Impacts**



Key:

24MO###

Historic Site
Recording Number

No Effect

No Adverse Effect

Adverse Effect

Table 5.1
Impacted Properties Protected by Section 4(f)

Site #	Location	Type of Site	Type of Impact	Determination of Effect
24MO718	Bitterroot Branch of the Northern Pacific Railroad	Railroad	Crossing	No Effect
24MO800	1508 South 5 th Street	Residence	Right-of-Way	No Effect
24MO811	824 Russell Street	Residence	Full Acquisition	Adverse Effect
24MO819	941 Kern Street	Residence	Full Acquisition	Adverse Effect
- na -	Bitterroot Branch Trail	Trail	Crossing	- na -
- na -	Milwaukee Trail	Trail	Crossing	- na -
- na -	Shady Grove Trail	Trail	Crossing	- na -

All impacts to 29 historic properties are completely avoided by the Preliminary Preferred Alternative. Minimal right-of-way would be required from one property (24MO800) at the intersection of Russell Street and South 5th Street as depicted in Figure 5-2. Approximately 325 square feet of new right-of-way would be required along the eastern edge of this property adjacent to Russell Street. This is a narrow sliver of right-of-way necessary for the roadway expansion and inclusion of bicycle lanes, boulevard, and sidewalk.

Through this Environmental Impact Statement, the Federal Highway Administration is indicating its intent to make a *de minimis* finding on the impacts to 24MO800, as well as three recreational trails, and the railroad currently intersected by Russell Street. The required coordination is outlined below.

Two additional residential properties protected by Section 4(f) would be fully acquired under the Preliminary Preferred Alternative because the new right-of-way bisects the historic structures themselves. These impacts are discussed in Section 5.3, following.

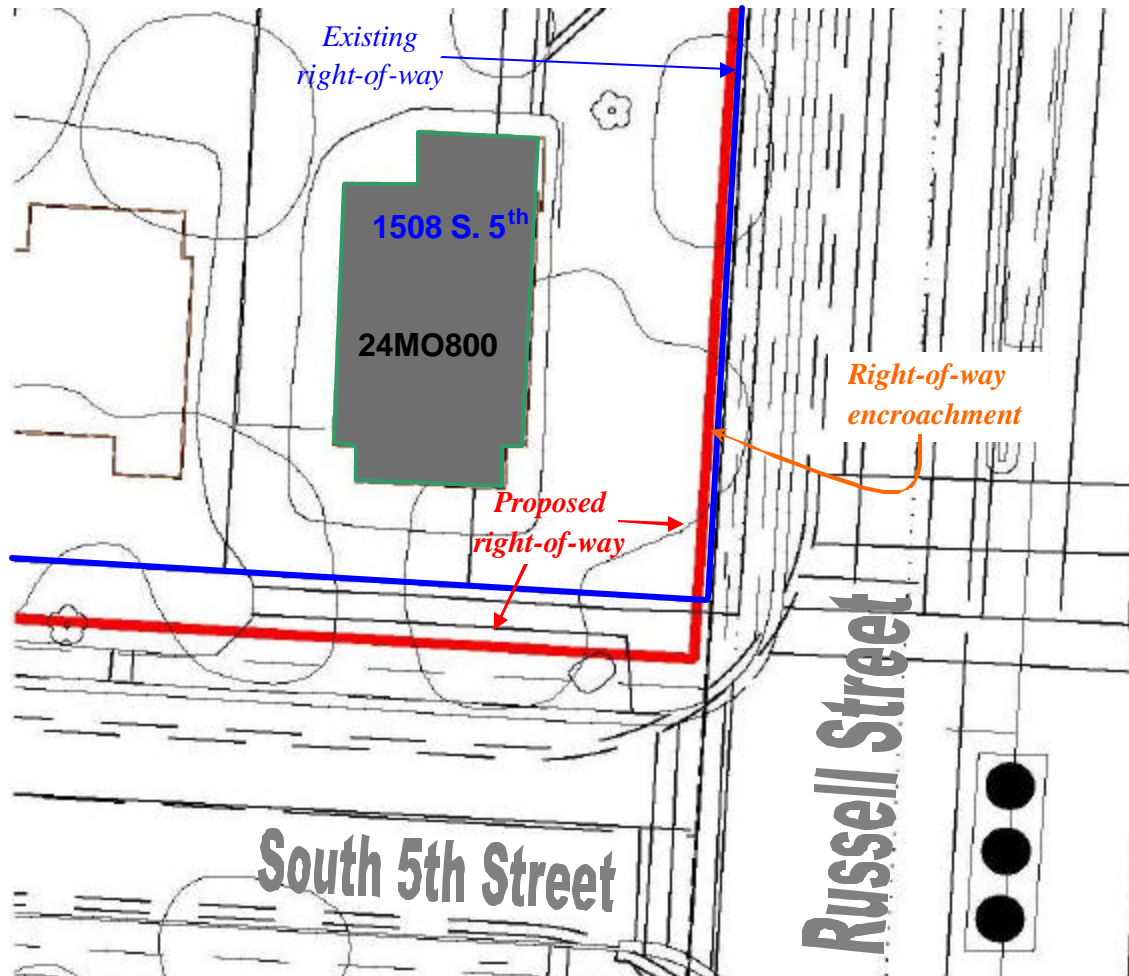
***De Minimis* Coordination**

The Montana State Historic Preservation Officer has concurred with the finding of **No Effect** on site 24MO800 at 1508 South 5th Street although there is a minimal use of the property, and the Federal Highway Administration has notified the Officer that they have made a *de minimis* finding based on this Section 106 determination of effect. The Public Hearing and comment period being conducted for the Draft Environmental Impact Statement will serve as the opportunity for public review and comment on these impacts. The Federal Highway Administration's *de minimis* letter is included in Appendix E, and the Montana Department of Transportation's determination of effect and the State Historic Preservation Officer's letter of concurrence are included in Appendix C.

The Bitterroot Branch of the Northern Pacific railroad main line would continue to be intersected by Russell Street, and would not experience any further physical disruption. The Bitterroot Branch Trail, Milwaukee Trail, and Shady Grove Trail would each also continue to be intersected by Russell Street as depicted in Figure 5-3, but the proposed project would provide for grade-separated crossings and provide an overall improvement to the recreational use of these

trail facilities. Thus, the impact to these Section 4(f) recreational facilities would be short-term and temporary. Additionally, this transportation enhancement project and mitigation activities associated with any of the Build Alternatives use the protected Section 4(f) properties for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection. The addition of grade-separated crossings, included in the Build Alternatives, would promote the future use of the three trails.

Figure 5-2
De Minimis Impacts on Site 24MO800



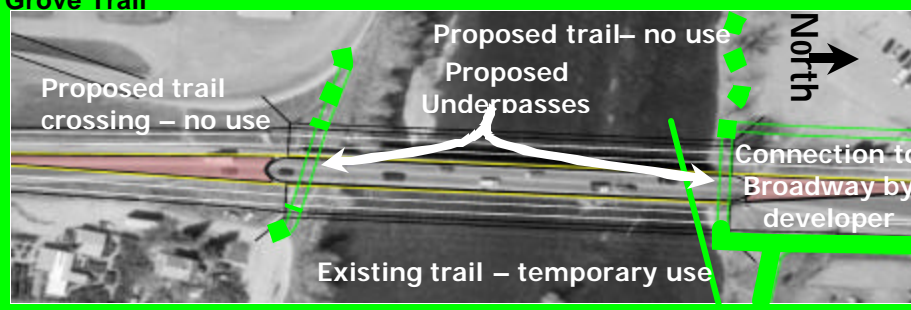
Chapter 5.0 - Draft Section 4(f) Evaluation

Figure 5-3

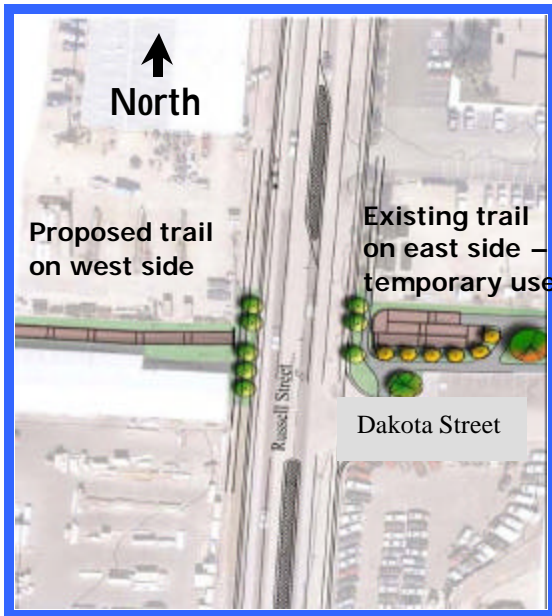
De Minimis Impacts to Trail Crossings

as Elements of the Proposed Russell Street reconstruction project

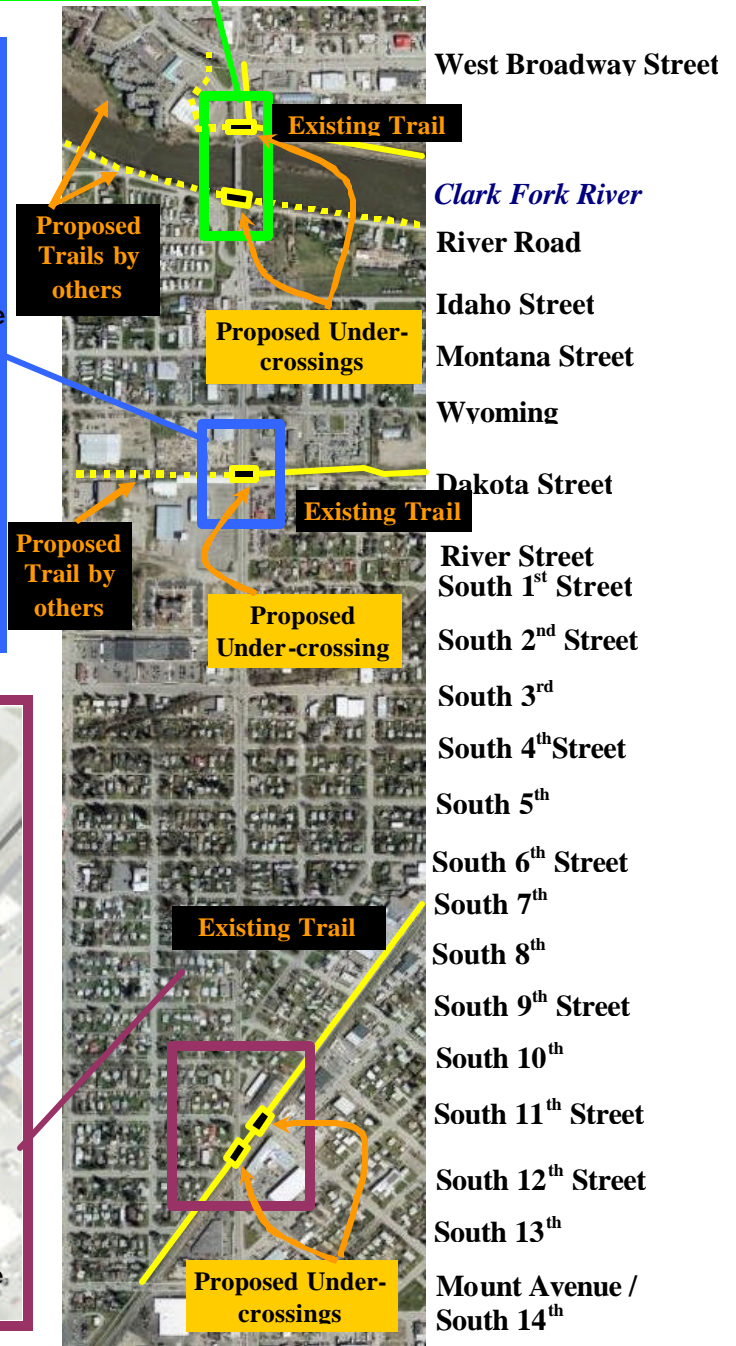
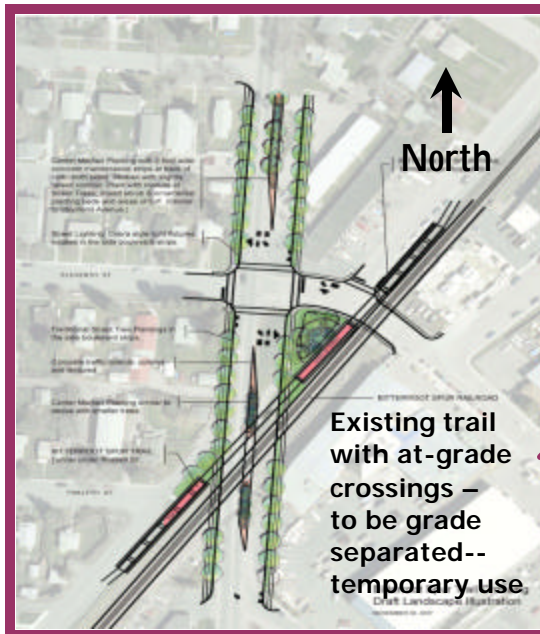
Shady Grove Trail



Milwaukee Corridor Trail



Bitterroot Branch Trail

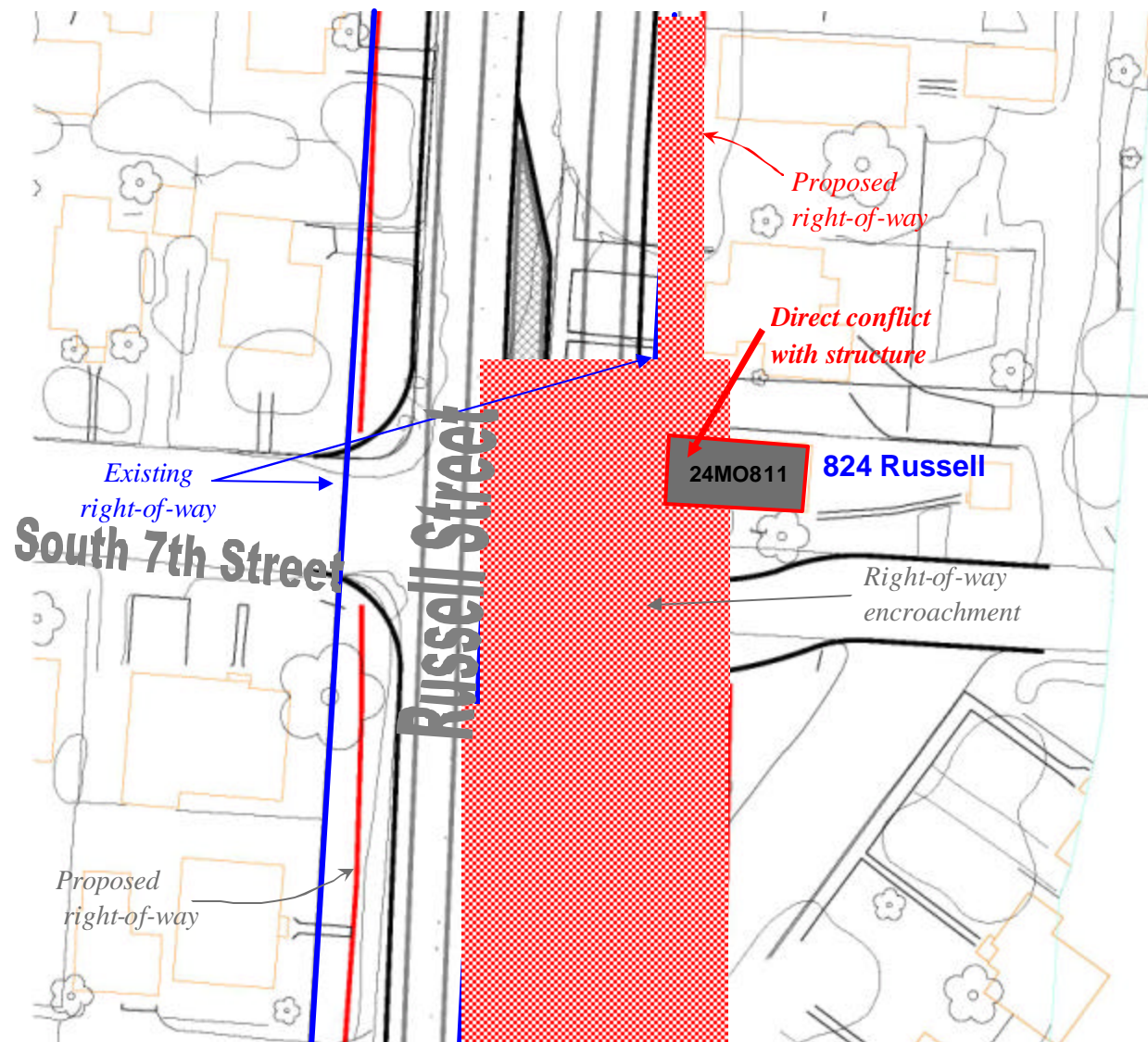


5.3 Impacts on the Section 4(f) Properties

The proposed construction limits of the Build Alternatives are in direct conflict with two residential properties (24MO811 and 24MO819) protected by Section 4(f).

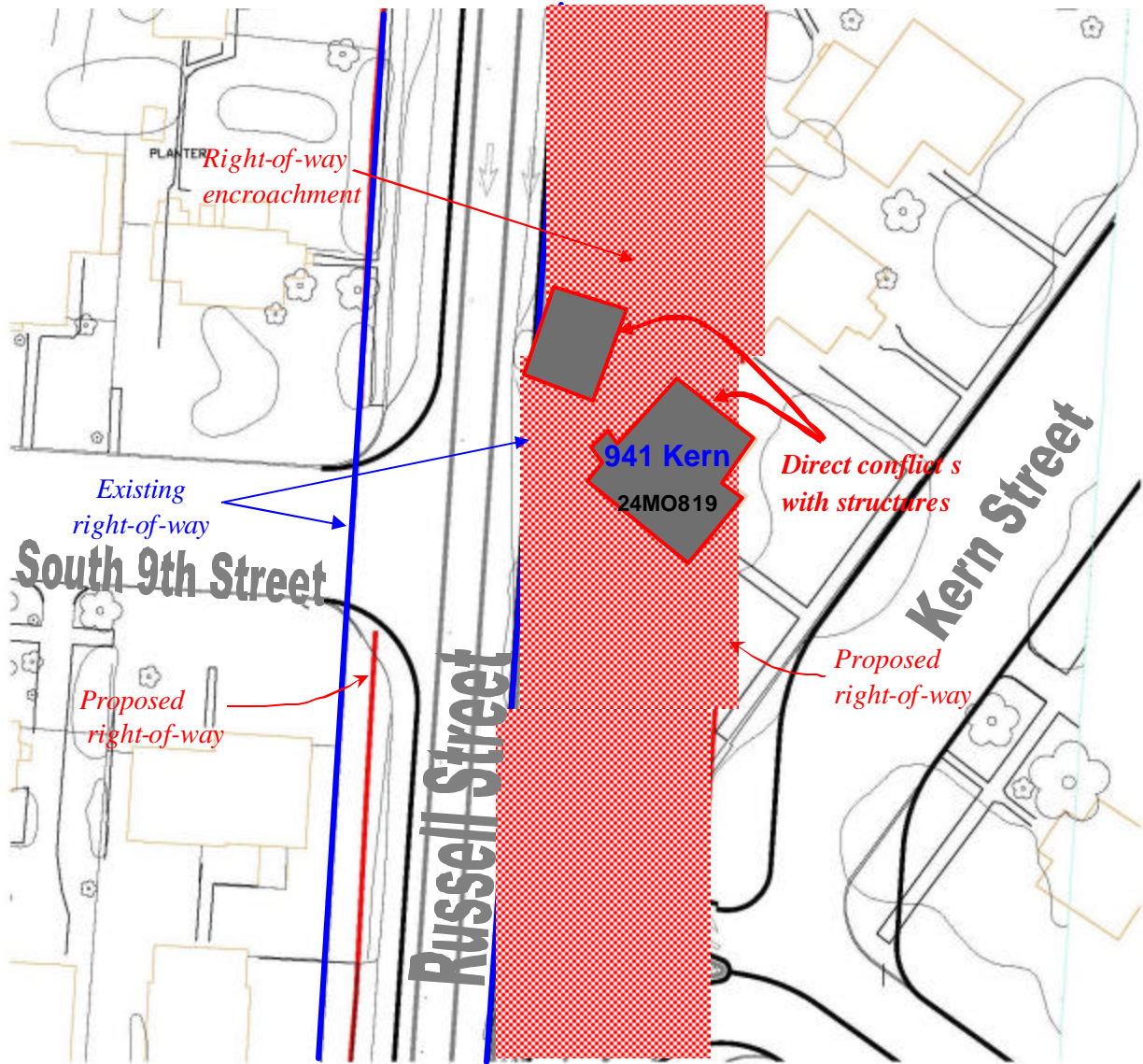
As illustrated in Figures 5-4 and 5-5, the proposed new right-of-way completely bisects these two residential structures along Russell Street. These structures could not remain in their current location with the proposed roadway improvements, resulting in a “use” under Section 4(f).

Figure 5-4
Impacts on 824 Russell Street
(24MO811)



Chapter 5.0 - Draft Section 4(f) Evaluation

Figure 5-5
Impacts on 941 Kern Street
(24MO819)





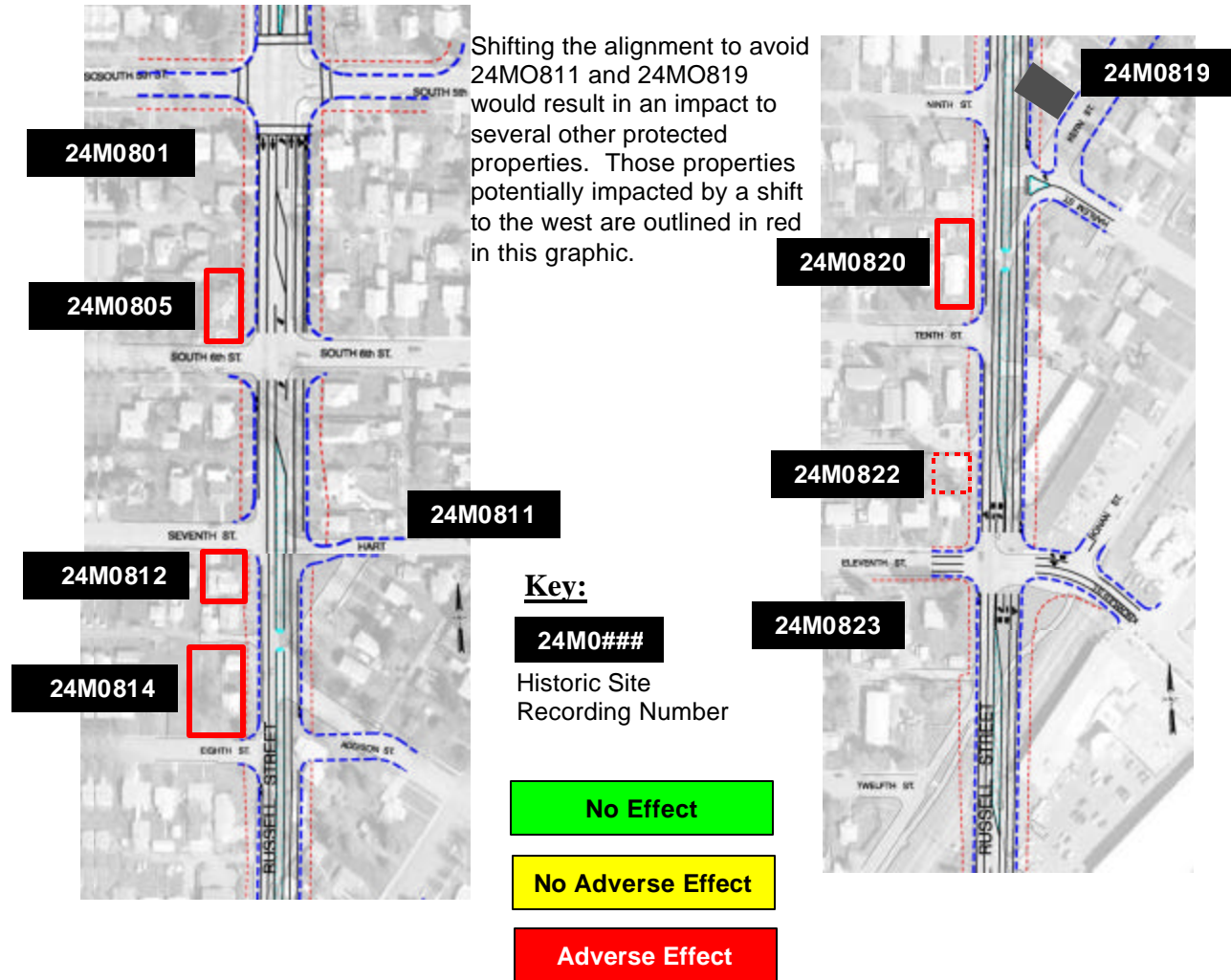
5.4 Avoidance Alternatives

The only complete avoidance alternative available is the No-Build Alternative. This option was determined to be unreasonable because it does not satisfy the basic Purpose and Need for the proposed project. Any basic widening of Russell Street will impact 24MO819. The realignment of Hart and South 7th Streets along with the basic widening of Russell Street will impact 24MO811. The implementation of a single element included in the Build Alternatives such as a sidewalk, would impact these properties. Thus, any refinement of the Build Alternatives to avoid impacts is not feasible or prudent because the resulting alternatives would fail to meet Purpose and Need.

Traditional means of avoiding protected resources might include narrowing the cross-section of the roadway through steepened side slopes, or narrowing or eliminating entire elements of the improvements, or shifting the alignment away from those resources. In this case, even minimal improvements in the corridor would impact Section 4(f) resources, and an alignment shift would simply impact different and more numerous resources protect by Section 4(f).

Any capacity improvements on Russell Street would result in impacts to Section 4(f) resources. As illustrated in Figure 5-6 below, shifting the alignment to the west to avoid impacts to site 24MO811 would result in an impact to sites 24MO805, 24MO812, and 24MO814. Similarly, shifting to the west to avoid impacts to site 24MO819 would result in impacts to sites 24MO820 and possibly 24MO822. The proposed alignment avoids impacts to the remaining Section 4(f) properties, and was determined to be the least damaging alternative overall.

Figure 5-6
Avoidance Alternative Constraints



Due to the location of several 4(f) properties in immediate proximity and on both sides of the existing alignment, avoidance of all impacts to all Section 4(f) properties is not feasible with any safety or mobility improvements in the Russell Street corridor. A shift to the west to avoid the structure at site 24M0811 and 24M0819 would result in an undesirable “kink” in the Russell Street alignment, and would result in additional impacts to the Section 4(f) properties on the west side of the existing alignment. The proposed alignment also minimizes impacts to other non-protected properties in proximity to these two sites.



Because there is no feasible and prudent avoidance alternative the Preliminary Preferred Alternative on Russell Street is the only design option which causes the least overall harm in light of the Section 4(f)'s commitment to preservation of Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites within the corridor. In accordance with 23 CFR 774.3(c)(1), the following criteria were considered when making this determination:

- Ability to mitigate adverse impacts to Section 4(f) property
 - Because the Build Alternatives all require complete acquisition of the properties, mitigation would come in the form of a Historic American Building Survey document, an oral history to Montana Historical Society Standards, and large format photographs provided to the Montana State Historic Preservation Office and the Missoula County Historic Preservation Office in accordance with the Memorandum of Agreement contained in Appendix C.
- The relative severity of the remaining harm to the Section 4(f) property after mitigation
 - All Build Alternative result in a full acquisition and removal of these two historic resources.
- The relative significance of the Section 4(f) property
 - These two structures are representative of those typical to the historic south-side development and Missoula's 1950s working class neighborhood. A number of similar structures would remain in the immediate vicinity.
- The views of the officials with jurisdiction over each Section 4(f) property
 - According to coordination with the State Historic Preservation Office, these resources are very similar to others within the project corridor.
- The degree to which each alternative meets the purpose and need of the project
 - All four-lane alternatives satisfy the Purpose and Need, but the Preliminary Preferred Alternative is able to eliminate impacts to up to three other Section 4(f) properties within the corridor.
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protect by Section 4(f)
 - The order of magnitude difference in impacts to other resources within the corridor from the Build Alternatives is relatively minor, however, the Preliminary Preferred Alternative results in fewer residential and commercial displacements.
- Substantial differences in costs among the alternatives
 - There is approximately a 12 percent difference in the high and low cost estimates for the forwarded Build Alternatives, with the Preliminary Preferred Alternative being less than one percent more than the least cost alternative.

For the above reasons, the proposed alignment is the most prudent in light of the statute's preservation purpose.

5.5 Measures to Minimize Harm

Throughout the corridor, efforts were made to minimize impacts to surrounding residential and business locations in response to the expressed concern to maintain the sense of community. Special attention was paid to protected Section 4(f) properties, however the minimum space needed for the safety and operational improvements did not allow for complete avoidance. Minimization efforts were described previously as part of the avoidance measures.

5.6 Coordination

The Montana Department of Transportation and Federal Highway Administration have coordinated the proposed impacts to historic properties with the Montana State Historic Preservation Officer (see correspondence in Appendix C).

Summary and Approval

All required alternatives have been evaluated and the Preliminary Preferred Alternative includes all possible planning to minimize harm which will be incorporated in this proposed project. This document is submitted pursuant to 49 U.S.C. 303 and in accordance with the provisions of 16 U.S.C. 470f.



6.0 LIST OF PREPARERS AND REVIEWERS

Reviewer/Affiliation	Role	Education and Experience
Theodore G. Burch P.E. Program Development Engineer FHWA	Lead Agency	B.S., Civil Engineering, Masters of Engineering – Structures, Program Development Engineer and Team Leader for the statewide program areas of planning, environment, safety and design, right-of-way, and materials. 19 years experience in highway engineering, environmental review and program/project management.
Carl James P.E., P.L.S. Transportation Specialist FHWA	Lead Agency	30+ years experience in planning, design, construction, environment, and right-of-way.
Craig Genzlinger P.E. Operations Engineer FHWA	Lead Agency	B.S. Civil Engineering. Operations Engineer. 20 years of professional experience.
Lloyd H. Rue, P.E., P.T.O.E. EIS Reviewer FHWA	Lead Agency	B.S. Civil Engineering, M.S. Civil Engineering. 21 years experience in geometric design, traffic engineering, and safety.
Dwane Kailey, P.E. Missoula District Administrator MDT	Lead Agency	B.S. Civil Engineering. District Administrator. 13 years of professional experience.
Shane Stack, P.E. Missoula District Engineering Services Engineer MDT	Lead Agency	B.S. Civil Engineering. 12 years of transportation related experience.
Miki Lloyd, P.E. Consultant Project Engineer MDT	Lead Agency, Interagency Coordination	B.S. Civil Engineering. 13 years of professional experience.
Tom Martin, P.E. Bureau Chief - Environmental Services MDT	Lead Agency	B.S., Civil Engineering. Over 14 years in transportation engineering, environmental review and program/project management.
Heidy Bruner, P.E. Engineering Section Supervisor Environmental Services MDT	Lead Agency, Environmental Compliance	B.S., Environmental Engineering. Approximately 10 years environmental engineering review, design and management.

Chapter 6.0 - List of Preparers and Reviewers

Table Continued:

Reviewer/Affiliation	Role	Education and Experience
Susan Kilcrease Environmental Services Missoula District MDT	Lead Agency, Environmental Compliance	B.S., Civil Engineering. B.S. Business Administration. 6 years in project management and 13 years in environmental project development and compliance.
Steve King, P.E. Public Works Director City of Missoula	Lead Agency	B.S., Civil Engineering. Over 19 years of Civil and Municipal Engineering and administrative experience.
Kevin Slovarp, P.E. City Engineer City of Missoula	Lead Agency	M.S., Civil Engineering. B.S. Business Administration. 10 years of professional experience.
Gregg Wood Special Projects Coordinator City of Missoula	Lead Agency	B.S., Building Construction. Over 15 years of construction management experience on large commercial projects.
Preparer/Affiliation	Role	Education and Experience
Darryl L. James, AICP HKM Engineering	Project Management, Environmental Compliance	M.P.A., with an Environmental Concentration; B.A., Public Affairs and Political Science. Senior consultant with over 15 years of professional experience in transportation planning, NEPA analysis, and technical report writing.
Jennifer James HKM Engineering	Deputy Project Manager, Public Involvement	B.S., Civil Engineering. Over eight years experience in environmental technical documentation, public involvement, and traffic engineering.
Sarah Nicolai HKM Engineering	Document Preparation	B.A., Civil Engineering (ongoing). Over four years of legal and policy-related experience, planning, and environmental documentation.
Tyler J. Schott HKM Engineering	Document Preparation	B.A., Civil Engineering (ongoing). One year of environmental analysis and documentation experience. Professional focus on transportation planning and environmental documentation.
Phil Odegard, P.E. HKM Engineering	Preliminary Design	B.S., Civil Engineering. Over 20 years experience in alternatives analysis, feasibility studies, and comprehensive roadway design.



7.0 COMMENTS AND COORDINATION

The proposed Russell Street and South 3rd Street reconstruction project is a cooperative project of the City of Missoula, Montana Department of Transportation, and the Federal Highway Administration. The project planning process included extensive public outreach through various committees, public meetings, a door to door neighborhood canvass, mailings, and website.

7.1 Advisory Committees

Project Advisory Committee

The Advisory Committee was made up of federal, state, regional, and local agency representatives and environmental, business, and local citizen representation. This group was established to provide recommendations and input to the project team. Group members were charged with the responsibility to act as a liaison between their constituents and the project team. They were also active in the outreach, preparation, and attendance of the public meetings. Committee members' participation was integral in keeping the project team informed about specific and broader public concerns.

Committee members spent considerable time discussing critical project issues and participated in twelve meetings over the course of two years, during which they developed an alternative ranking matrix. The Advisory Committee also recommended nine design features that would be common to all alternatives. These nine design features, discussed in Chapter 2, helped guide the development of the Build alternatives based on the Purpose and Need outlined in Chapter 1.

Having fulfilled their intended responsibilities to the proposed project, the committee was disbanded in 2006. A list of all Advisory Committee Members is listed in Table 7.1 below.

Table 7.1
Advisory Committee Members

Organization	Representative
Bicycle/Pedestrian Advisory Board	Mike Beltz
Bicycle/Pedestrian Advisory Board	Eric Edlund
Corridor Resident (Shared)	Mike Hanson
Corridor Resident (Shared)	Kate Sutherland
Freight Haulers	Jim McKinny
Local Business Representatives	Kevin Gordon
Local Business Representatives	Nate English; John Dayries
Local Business Representatives	Don Sokoloski
Local Business Representatives	Mark Denton
Local Business Representatives	Norman Carey
Low Income Housing	Kathy Dutton
Missoula Chamber of Commerce	Katie Ward
Missoula in Motion	Nora Knell
Missoula Indian Center	(Karla Harris) - Peggy Cochrn

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Missoula Trails	Bob Giordano
Missoula Urban Transit District Board	Nancy McKiddy
Office of Transportation, The Associated Students of The University of Montana	Nancy McKiddy
Montana Rail Link	Steve Werner
MT Public Health & Human Services	(John Collins) – Trusty, Marilyn
MT Public Health & Human Services, Disabled Services	Paul Peterson
Neighborhood Council, Emma Dickenson/Orchard Homes	Don Stinger
Neighborhood Council, Franklin to the Fort	Jerry Tahija
Neighborhood Council, Northside/Westside	Bob Jaffe
Neighborhood Council, Riverfront	Ken Thompson
Neighborhood Council, Rose Park	Linda Smith
Neighborhood Council, Southgate Triangle	Hans Christiansen
Smart Growth Transportation Committee	John Couch
City of Missoula Public Works	Bruce Bender
City of Missoula Public Works	Joe Oliphant
City of Missoula Public Works	Steve King
Missoula County Road Dept.	Gregory H. Robertson
Federal Highways Administration (FHWA)	Craig Genzlinger
Missoula City Council Ward 2	Anne Kazmierczak
Missoula City Council Ward 2	Jim McGrath
Missoula City Council Ward 3	John Torma
Missoula City Council Ward 3	Lou Ann Crowley
Missoula City Council Ward 6	Ed Childers
Missoula City Council Ward 6	Clayton Floyd
Missoula Office of Planning and Grants	Dave Prescott
Missoula Redevelopment Agency (MRA)	Geoff Badenoch
Montana Department of Transportation (MDT)	Fred Bente
House of Representatives	Tom Facey
Montana Department of Transportation (MDT)	Loran Frazier
Herrera Environmental Consultants, Inc.	Kris Lee
Skillings-Connolly, Inc.	Kelly Harris
Skillings-Connolly, Inc.	Richard Weaver
Skillings-Connolly, Inc.	Thaddeus Dickson

Transportation Technical Advisory Committee

The Transportation Technical Advisory Committee is a standing committee composed of technical specialists from federal, state, county, and city agencies. The committee was responsible for providing technical guidance on compliance with federal, state, county, and city regulations and standards, and issues such as threatened and endangered species, and social and economic concerns.



7.2 Public Meetings

The Notice of Intent to prepare an Environmental Impact Statement was published in the Federal Register/Vol. 65, No. 201/Tuesday, October 17, 2000.

The initial Public Scoping Meeting was held November 16, 2000. Five additional public meetings were held prior to the publication of this Draft Environmental Impact Statement. A formal Public Hearing will also be held between publication of the Draft Environmental Impact Statement and the Final Environmental Impact Statement. The public meetings conducted to date are summarized in Table 7.2.

Table 7.2
Summary of Public Meetings

Date and Place	Attendance
November 16th, 2000 Franklin Elementary School	49 people signed in for an estimated attendance of 60 people.
February 8th – 12th, 2001 Missoula City Hall Franklin Elementary School Missoula Public Library	91 people signed in over the course of the 4-day workshop plus an additional 41 elementary students for an estimated attendance of 150.
May 7th, 2001 Missoula Public Library	89 people signed in for an estimated attendance of 100.
February 21st, 2002 Missoula Public Library	141 people signed in for an estimated attendance of 150.
March 15 th , 2002 Missoula City Hall	45 people signed in Follow up meeting with Dan Burden of Walkable Communities
October 26, 2006 Franklin Elementary School	115 people signed into the project status meeting.
April 16, 2008 Franklin Elementary School	97 people signed in for an estimated attendance of 110

The public meetings covered a range of topics and issues over the course of the project. All meeting locations were accessible under the Americans with Disabilities Act (ADA), and held at locations easily reached by transit. At every meeting, name and address information was obtained from all attendees by placing a dedicated greeter at the door to welcome citizens to the event, ensure sign-in, distribute a project newsletter, and provide a brief overview. All public meetings encouraged participants to provide written comments by placing comment cards or notes directly on displays and maps. All comments received have been retained as part of this proposed project's Administrative Record.

November 16, 2000 (Public Scoping Meeting) - The first public scoping meeting was held after publication of the Notice of Intent. The goal of this meeting was to provide the public with an initial overview of the project and to collect feedback and comments to help guide the public involvement process and understand the issues.

February 8-12, 2001 (Community Workshop) - The second meeting was a community workshop hosted by Dan Burden of *Walkable Communities*. The goal of the community workshop was to bring the community together over the course of several days in a brainstorming session to identify community values, identify issues and concerns, and develop

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conceptual ideas to guide the development of alternatives. The *Russell Street and South Third Street Reconstruction Workshop Report* documented the process and outcomes of the community workshop and was distributed on the City's website, at subsequent open houses, City Hall, and made available at the Missoula Public Library. Copies of the report are available upon request.

Workshop participants showed a preference for investigating roundabouts as an alternative to signalized intersections to help improve the visual quality, safety, and landscaping opportunities throughout the corridor. Roundabouts were subsequently investigated and remain as prominent intersection control features on two out of four current alternatives.

May 7, 2001 (Public Meeting) - The third public meeting focused in on the preliminary project alternatives. Large strip maps were placed on the walls of the Missoula Public Library meeting room so that citizens could compare alternatives and view potential impacts. In addition, the report produced from the community workshop was provided for citizens to view. Other displays at this meeting included a project schedule, a display providing an overview of the NEPA process, and an educational video about roundabouts.

February 21, 2002 (Public Meeting) - The fourth public meeting further refined community feedback and advisory committee input and provided corridor strip maps and other displays for comment. The strip maps illustrated action alternatives, which were overlaid on aerial photos of the No-Build alternative and citizens were encouraged to write comments on the maps. In addition to the alternative displays, a station depicting bike and pedestrian crossings, a display providing an overview and definition of historical properties, and a graphic providing information regarding roundabouts were all available for comment.

March 15, 2002 (Follow-up Meeting) – This meeting was held to discuss the *Russell Street and South 3rd Street Reconstruction Workshop Report*. During this informal meeting, jointly organized by community and project team members, Dan Burden of Walkable Communities described in greater detail several aspects of the report, expanded on the principles of bike and pedestrian accessibility, and discussed roundabouts. This meeting provided community and project team members the opportunity to actively engage in a question and answer session with Dan Burden and hear additional community issues and concerns.

October, 26 2006 (Public Information Meeting) – This meeting was held to provide an update to the public on the project, project delays, and a subsequent change in the consultant team. The meeting summarized the project development process, where the project stood in the overall process, identification of the Preliminary Preferred Alternative, and the Section 4(f) issues that had stalled the proposed project.

April 16, 2008 (Public Information Meeting) – This meeting was held to provide an update to the public on the project, and the change in the Preliminary Preferred Alternative. The meeting summarized the project development process, the progress on the project since the last public meeting, identification of the new Preliminary Preferred Alternative, and the Section 4(f) issues which mandated the change in the Preliminary Preferred Alternative.



Public Hearing – A formal Public Hearing will be held during the public review period on this Draft Environmental Impact Statement to take public comments on this document.

7.3 Agency Coordination

Additional resource agencies and government entities have been consulted when specific issues necessitated involvement. Copies of correspondence received from these agencies is contained in Appendix D.

Given the location of the proposed project approximately 32 kilometers (20 miles) south of the Flathead Indian Reservation, the Confederated Salish Kootenai Tribe was notified of the project.

7.4 Summary of Public Comments

Comments on the Russell Street / South 3rd Street project have been received since the initiation of the project in 2000, and those comments have been retained in the Administrative Record. Comments and concerns covered a wide range of issues that affected all travel modes. Suggestions ranged from small improvements within the study area, while others were broad, far-reaching recommendations that went well beyond the scope of the proposed project. Issues identified through public scoping frequently involved the following:

- System capacity
- Roundabouts
- Bicycle and pedestrian compatibility and safety
- Traffic safety and crash reduction
- Emergency medical services compatibility
- Local bus transit service
- Environmental issues, including air quality, noise, fish, pedestrian-oriented development and land use planning, cut-through traffic in neighborhoods, potential for displacements, and construction impacts.
- Access and ADA considerations
- Cost of construction

Most of the traffic comments deal with the subject of congestion, capacity, cut-through traffic, flow, and general vehicular usability. Some comments were found to indicate some level of preference for improving the capacity of the Russell Street and South 3rd Street corridors. Most comments frequently focused on more comprehensive issues of creating multi-modal transportation systems that do not “turn Missoula into Los Angeles.” In other instances, comments that did not voice support for increasing capacity did so by discouraging a five-lane freeway that would “divide neighborhoods.”

The support for the capacity improvement was often directly stated, for example, “Russell is a mess and needs expansion” or “As fast as Missoula is growing, we do NOT need another leisurely route; we need to get traffic across the river in a very efficient manner.” Along the same line of direct support, another commenter stated that, “There is no question that Russell

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Street between South Avenue and Broadway needs to be widened and upgraded. In doing so, I suggest that it be designed as a major thoroughfare much like Reserve Street.”

Others expressed support for capacity improvements less directly by suggesting roundabouts be used to “keep the traffic moving, end the stop and go, help air quality.” Some expressed concerns about excessive cut-through traffic and encouraged the project team to alleviate the neighborhood overflow. On several occasions public comments simultaneously supported both “slow-moving, and continuously flowing traffic” or noted “four lanes takes the pressure off Orange.”

Overall, there appears to be strong support for capacity improvements and an acknowledgement that congestion is an issue. Caveats include concerns that the neighborhood will be divided, excessive relocations required, or high speeds encouraged. In addition, many stressed the need to ensure that cyclists and pedestrians can coexist safely with vehicles in a manner that encourages multi-modal use.

A higher percentage of comments relate to bicycles than to environmental impacts, aesthetics, or pedestrian issues. These numbers do not imply support for or against any given topic, but are indicative of the amount of community dialogue around these issues.

Reserve Street as a Negative Model

An issue that was made many times but is difficult to categorize is the sentiment that Russell Street not become another Reserve Street. Reserve Street is a four-lane road with a center turn lane. Raised medians and landscaping are generally not abundant along Reserve Street. Many have written in and challenged the project team to “...consider alternatives to what was done on Reserve Street.” The features of Reserve Street that received negative comments include excessive pavement width, lack of landscaping, high speed, and the general lack of bicycle and pedestrian facilities.

However, some individuals would approve of reconstructing Russell Street similar to Reserve Street. A few written statements have been received stating that Russell be “designed as a major thoroughfare such as Reserve Street. Please reconstruct it as wide as possible to move vehicles as fast, as safe and as economically as possible.” There have been few comments encouraging Russell Street to be constructed like Reserve Street.

Stephens Avenue as a Positive Model

Stephens Street has been repeatedly offered as a positive example of how to approach the proposed reconstruction project. Stephens Street is a four-lane road with raised medians and substantial use of landscaping. At the February 21, 2002, over 140 people attended to view the current project alternatives. Many offered comments, both verbal and written, that cited Stephens Avenue as a benchmark of excellence in road design and stated they would like to see Russell Street and South 3rd Street look similar. One person wrote, “Lately I’ve been pleased to travel the Stephens Avenue route to my home off of North Orange because it feels safer and more comfortable than any other main artery.” Many others complimented the City on the use of landscaping and observed that cars tend to drive more slowly and more considerately on



Stephens Avenue. Many others appreciated that the newly reconstructed Stephens Avenue maintains the character and quality of the neighborhood.

All of the action alternatives and the Preliminary Preferred Alternative include features incorporated into the Stephens Avenue design, including curbs, gutters, sidewalks, boulevards, bicycle lanes, raised medians, landscaping, and lighting. The City has been able to offer Stephens Street as an example of a completed project that looks similar to how Russell Street and South Third Street would look after reconstruction.

Multimodal Design

Although some comments supported only bicycle improvements, with others advocating for only vehicular improvements, many people observed a need to design Russell Street and South Third Street in a way that accommodates all users. Some stated that, “Rebuilding our streets to accommodate the needs of bicyclists and pedestrians as well as cars is extremely important to me.” Others commented, “As a car owner and bicyclist, I believe that we need to make sure our streets are accessible to all transportation choices so that cars, bicyclists, and pedestrians can coexist safely and keep Missoula livable.” A multimodal system is identified in the project’s purpose and need. People continue to write comments supporting this approach, further emphasizing the community’s preference for a multimodal system.

Roundabouts or Signals

The emergence of roundabouts as an alternative to signalized intersections is a direct example of how the public involvement process has affected this project. The community workshop facilitated by Dan Burden and attended by over 150 people in February of 2001, encouraged citizens to offer their ideas for the Russell Street and South 3rd Street project. Of the many ideas offered at this meeting by members of the public, the idea of replacing some signalized intersections with roundabouts, in conjunction with other improvements, was common.

The community in attendance at the workshop perceived that roundabouts offered opportunities for landscaping, reduced the number of travel lanes, and offered safety improvements at intersections, and suggested that the project team do a more thorough evaluation of feasibility. After considerable study and scrutiny, roundabouts have been included in three out of the four action alternatives, and the Preliminary Preferred Alternative on South 3rd Street.

7.5 Other Public Involvement and Information Techniques

In an effort to gather information and inform as many citizens and interest groups as possible, a variety of public involvement techniques were used during the course of the study. These included maintaining an extensive mailing list, newsletters, an Internet website, press releases, student senate presentation, and a door to door canvass.

Door to Door Neighborhood Canvass

On September 26th and 27th of 2006, the project consultant conducted an informal door-to-door canvass of the neighborhood. A memo outlining the comments and concerns received is included in the Administrative Record. The intent was to inform those in the corridor that there was a

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new project team and to provide a personal invitation to the public information meeting in October. The consultants spoke with over 90 business owners, property owners, and residents and left post card invitations to the public meeting for those who were not available.

Many of the residents spoken with were concerned about impacts to their specific properties and how access would be impacted. Most were very anxious for the project to move forward because they feel the corridor is unsafe and the uncertainty has been difficult. A number of the residents and business owners expressed concerns regarding the roundabouts. There were questions about how they would operate, the amount of right of way needed, and whether or not they make sense in the locations proposed.

Student Senate Presentation

A presentation was made to the Associated Students of the University of Montana on February 2, 2007 at 6:00 pm. The Student Senate had passed a resolution opposing the Preliminary Preferred Alternative that was presented to the public in 2006. During discussions between the Student Senate and the consultant team, it became apparent that the Senate had previously been given inaccurate information regarding the Alternative. The presentation included a summary of the process, the alternatives that have been considered to date, and a detailed description of the Preliminary Preferred Alternative. The Senate agreed to reconsider their resolution once the Preliminary Preferred Alternative has been verified by the new consultant team.

Media

News releases were sent out prior to each series of public meetings. The news releases went to the local newspapers, televisions, and radio. Prior to public meetings, notices were also sent via postcards to all of those businesses and community residents that were on the self-designated distribution list. Approximately 500 postcards were sent out. These post cards and press releases notified the public of the topics, and time and place for each meeting, as well as information on accommodations for any known disability.

Internet Website

Throughout the study, Russell Street / South 3rd Street project information has been available on the Internet. Updates, meeting notices, public comments, screening, alternative information, and project contracts have been posted on the Russell Street webpage. The project web page is contained within the Montana Department of Transportation website where the public can view other projects and link back to the project page. The internet address was included in every newsletter published during the project.

Newsletters

Electronic newsletters were sent during the final phases of the Environmental Impact Statement process. To date, 10 newsletters were distributed to an e-mailing list of over 125 people.



8.0 DISTRIBUTION LIST

Federal Agencies

U.S. Fish and Wildlife Service
585 Shepard Way
Helena, MT 59601
Attn: Mark Wilson, Field Supervisor

U.S. Army Corps of Engineers
Regulatory Office
10 West 15th Street, Suite 2200
Helena, MT 59626
Attn: Allan Steinle, Montana Program
Manager

EPA Region 8 Montana Office
Air Quality Program
10 West 15th St., Suite 3200
Helena, MT 59626
Attn: Betsy Wahl

EPA Region 8 Montana Office
10 West 15th St., Suite 3200
Helena, MT 59626
Attn: John F. Wardell, Director

State Agencies

Montana State Historic Preservation Office
1410 Eighth Avenue
P.O. Box 201202
Helena, MT 59620-1202
Attn: Dr. Mark Baumler, Historian

Montana State Historic Preservation Office
1410 Eighth Avenue
P.O. Box 201202
Helena, MT 59620-1202
Attn: Josef Warhank, Historian/Compliance
Officer

Montana Fish Wildlife & Parks
1420 East Sixth Ave
Helena, MT 59620-0701
Attn: Glenn Phillips

Montana Fish Wildlife & Parks
3201 Spurgin Road
Missoula, MT 59804
Attn: Mack Long

Montana Department of Environmental
Quality
1520 East Sixth Ave
Helena, MT 59620-0901
Attn: Thomas Ellerhoff
Greg Hallstein

Montana Department of Natural Resources
and Conservation
1625 11th Avenue
Helena, MT 59104-0437
Attn: Mary Sexton, Director

Montana Environmental Quality Council
Office of the Director
Capital Post Office
P.O. Box 215
Helena, MT 59620

Montana State Library
1515 East 6th Avenue
P.O. Box 201800
Helena, MT 59620-1800
Attn: Roberta Gebhardt, Collections
Management Librarian

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Local Government Agencies

Missoula Public Works Department
435 Ryman Street
Missoula, MT 59802

Mayor's Office
435 Ryman Street
Missoula, MT 59802

Missoula Parks and Recreation Department
100 Hickory Street
Missoula, MT 59802
Attn: Donna Gaukler, Director

Orchard Homes Irrigation District
2641 Gleason
Missoula, MT 59804
Attn: Marvin Ross, District President

Mountain Line Transit
1221 Shakespear
Missoula, MT 59802
Attn: Steve Earle, Director

Missoula Ravalli Transportation
Management Association
127 West Spruce Street
Missoula, MT 59802

Missoula City Fire Department
625 East Pine Street
Missoula, MT 59802

Missoula Rural Fire District
2521 South Avenue West
Missoula, MT 59804

Missoula Parking Commission
128 West Main Street
Missoula, MT 59802

Missoula Redevelopment Agency
123 Spruce Street
Missoula, MT 59802

Missoula Street Maintenance Division
800 West Broadway
Missoula, MT 59802

Missoula Traffic Services Division
100 Hickory Street
Missoula, MT 59802

Missoula Wastewater Division
1100 Clark Fork Drive
Missoula, MT 59802

Missoula Environmental Health Services
301 West Alder
Missoula, MT 59802

Missoula County Commissioners
Missoula County Courthouse
200 West Broadway
Missoula, MT 59802

Missoula Conservation District
3550 Mullan Road
Missoula, MT 59808

Missoula Development Authority
200 West Broadway
Missoula, MT 59802

Missoula Co. Floodplain Administrator
435 Ryman Street
Missoula, MT 59802
Attn: Todd Kliezt